ATHLETIC JOURNAL

Vol. XXX No. 7 March, 1950

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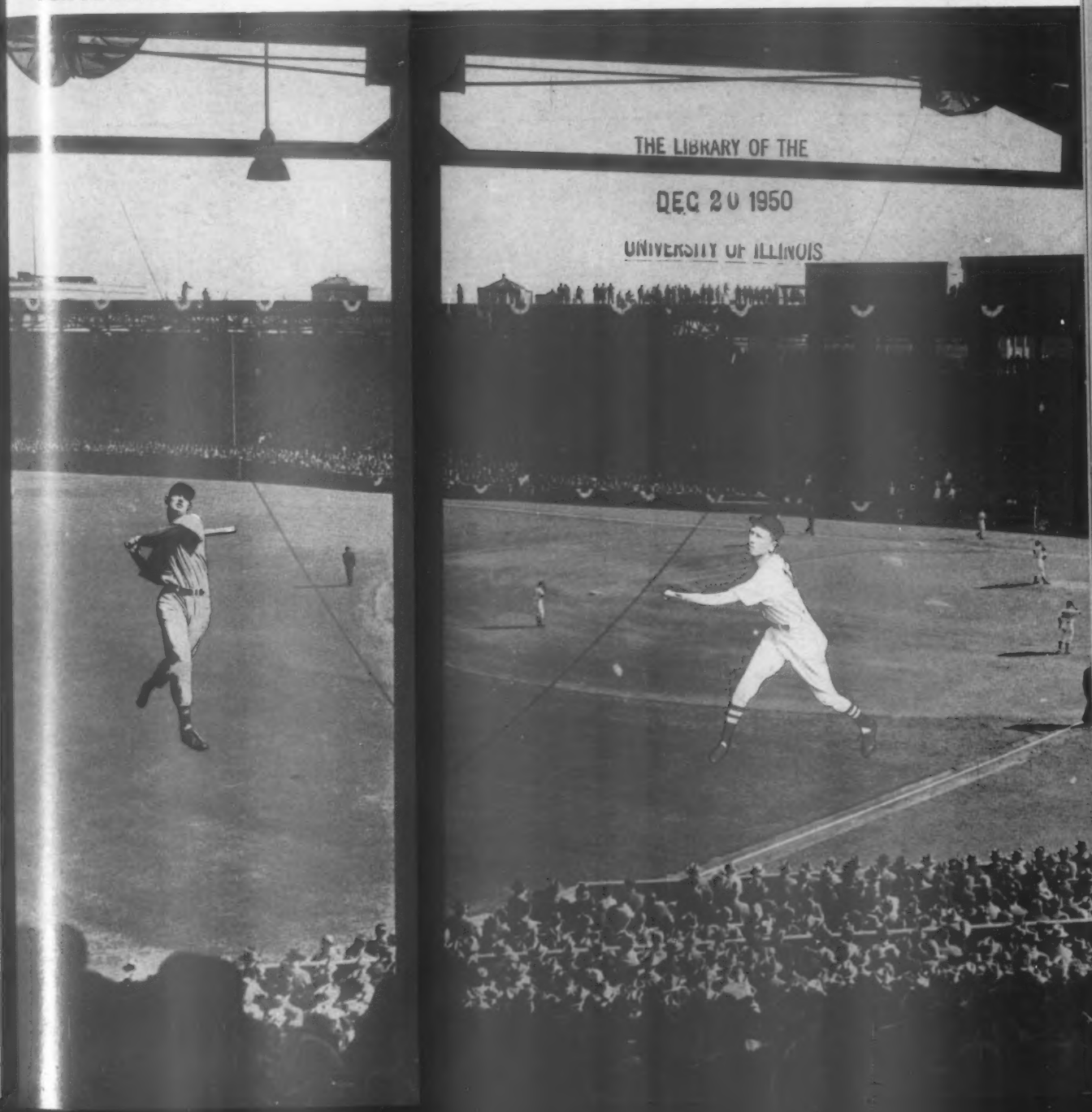

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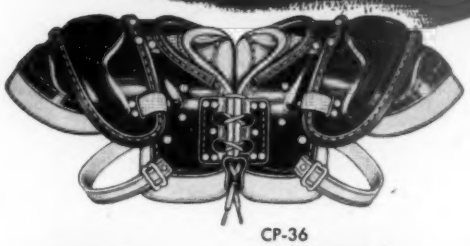

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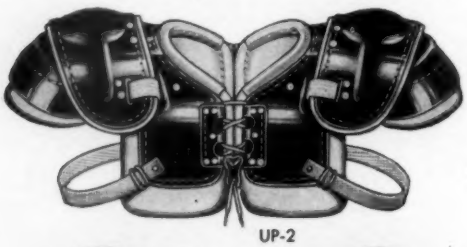

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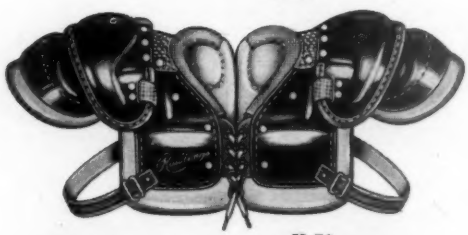

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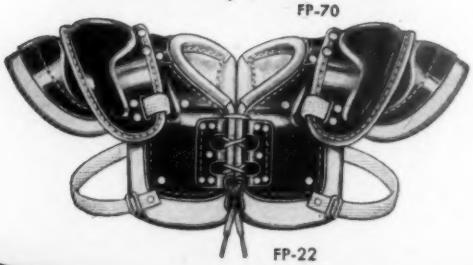

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Nation-Wide Amateur Athletics

Volume XXX **Number 7**

March, 1950

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FRONT COVER ILLUSTRATION

The pitcher throws, the batter swings, and the crowd goes wild. It is the same today as it was fifty years ago, but the techniques of the game are changing. For a new technique in catching be sure to read "A Forward Step in Catching" on page 9. Photos courtesy of the *Sporting News*.

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from here and there

JIM AIKEN, football coach at the University of Oregon, must feel somewhat secure in his position. Last year he was given faculty status and now his son, quarterback Jim Jr., is about to be married to Jacquelyn Newburn, the daughter of Dr. Harry K. Newburn, the university president. . . . Tex Oliver, who coached football at Oregon, St. Mary's Pre-Flight and Arizona, and who recently gave up a successful real estate business to sign as coach at Fullerton, California, Junior College, explains it this way: "When you've been in football as long as I was, you just don't feel alive unless you're mixed up with it somehow." . . . Robert Andrew Hall was recently appointed Director of Athletics of Yale University. He succeeds Robert J. H. Kipthuth who resigned in December because of ill health. Hall was active in track, football, and basketball as an undergraduate at Yale and coached football briefly following graduation. . . . Steve Sebo, football letterman at Michigan State College in 1934, '35 and '36, has been appointed freshman football coach at his alma mater. He has coached at Petroskey, Michigan, High School; Alma College, and served as backfield coach at Harvard University last year. . . . Bob Bryant, former Texas Tech tackle and member of the San Francisco 49ers for four years, has signed as line coach at the University of Arizona.

* * *

THE Central District Association for Health, Physical Education and Recreation convention will be held in Duluth, Minnesota, March 29 — April 1. Some of the highlights of the convention will be: a panel discussion "Physical Education in Other Nations"; a big demonstration by Duluth public schools; section meetings in health, men's physical education and athletics, public school recreation, etc. . . . Those interested in obtaining jobs as summer camp counselors should get the 1950 Summer Camp Job Directory which lists hundreds of camp jobs all over the country. Cost: $1.00. Order from: Camp Service Bureau, Galloway Publishing Company, 705 Park Avenue, Plainfield, New Jersey. . . . Duke Jacobs, formerly assistant coach to Bud Wilkinson at Oklahoma, has been named head football coach and assistant professor of physical education at Fresno State College.

* * *

DR. EDDIE ANDERSON, who resigned recently as football coach at Iowa, returns to Holy Cross where he coached before going to Iowa. . . . Arthur "Dutch" Lonborg, after 23 years as basketball coach at Northwestern University, leaves to become athletic director at the University of Kansas. He will succeed Ernie Quigley who is retiring. . . . Art Valpey, football coach at Harvard, has resigned his position to become football coach at the University of Connecticut. He succeeds J. O. Christian who will become athletic director. . . . H. N. "Rusty" Russell, backfield coach at Southern Methodist, will take over as head coach next season succeeding Matty Bell who becomes athletic director. Bell has been coach since 1935. . . . Eddie Erdelatz, formerly assistant coach at Navy, St. Mary's and San Francisco, has been appointed head coach at Navy. George Sauer, whom Erdelatz replaces, will go to Baylor.

* * *

MARQUETTE University has added two assistants to its football staff: Orv Dermody, line coach at St. Norbert's College, and Don Fleming, backfield coach at the University of Washington. . . . Robert White, football and basketball coach at Joliet, Illinois, Catholic High School for two years, resigned recently to become backfield coach at Kansas State University. He was captain of the University of Indiana football team in 1942. . . . Ed Kercher, former Manatee High School (Bradenton, Florida) football center, has signed a four-year grant-in-aid scholarship at the University of Florida. . . . Hal Littleford, captain of the 1949 University of Tennessee football team, signed recently as backfield coach at East Tennessee State College.

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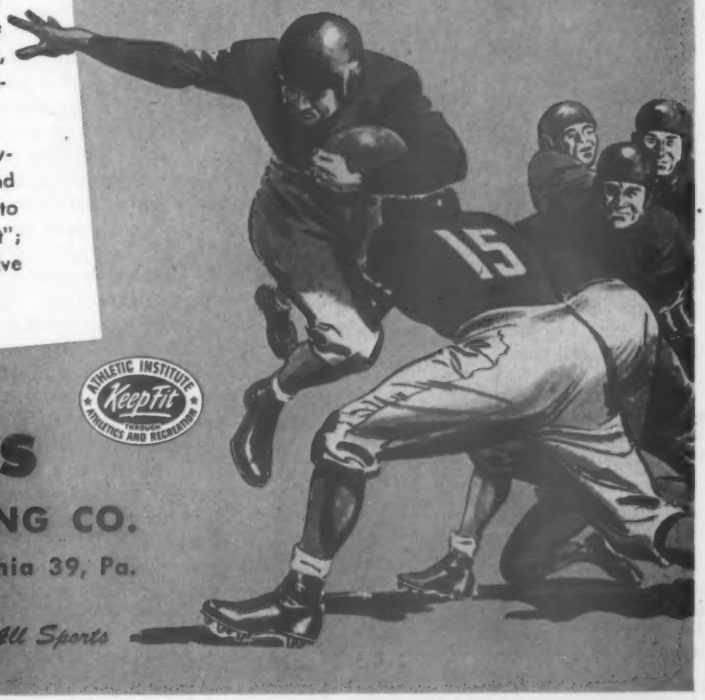

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The Batting Tee

By JOSEPH R. COOPER
Baseball Coach, Marshall, Michigan, High School

ONE of the biggest aids in teaching the fundamentals of hitting in baseball, especially to inexperienced boys, is the batting tee. My first experience with the tee was in 1947 when Tony Lucadello, scout for the Chicago Cubs, introduced and demonstrated the tee at Western Michigan College. Following this demonstration, we began to utilize it at Western and found it very helpful in aiding our hitting.

Because of the uncertainty of the spring weather in Michigan and the short practice period between the conclusion of basketball and the beginning of baseball, such a device as the batting tee can be very useful in the average high school. Here at Marshall, we use it both indoors and outdoors in our practice sessions.

In our indoor training, we include the tee in our daily practice schedule within the confines of our gymnasium. A pair of gymnasium mats serve as an excellent backstop and eliminate the possibility of breaking windows or causing other damage. We suspend the mats from a balcony but backboards or even a wall will work just as well. If mats are not available an old piece of canvas will do.

During each practice session every boy spends considerable time at the tee "hitting" under the guidance of the coach. Being unable to do any actual hitting inside, the boy is helped by this training to prepare himself, for actual batting practice when the weather permits. We do not leave the tee behind when we move outdoors as here we have three main uses for it: 1. to help the boy gain confidence and rid himself of slumps, 2. to help the boy find and correct his faults, 3. to utilize the time wasted while a boy is awaiting his turn at batting practice. This also has the boy prepared when he does take his turn at the plate.

Like any useful tool, the tee is of no value (in fact it may be harmful) if it is not used properly. Before using a tee, one main point must be stressed by the coach: it should not be used as if one were hitting golf balls on a driving range. The first time a boy uses this device he will attempt to hit the ball like a golf ball. This would be very harmful to the boy's hitting. When using the tee, actual game conditions must be simulated as far as possible. Let us take up the actual use of the tee in detail.

First, the batter should assume the same stance he would take in going to the plate in a game. We do not force the boy to use any certain stance when he is beginning. After he selects his own stance we sometimes modify it so it will suit his own natural ability better.

The batter should use his imagination and look at a make-believe pitcher sixty feet in front of the tee. He should visualize the pitcher's wind up and delivery. While doing this, his eyes should be focused constantly on this imaginary moundsman and not on the ball resting on the tee.

As the "pitcher" delivers the ball the batter moves his eyes to the tee and hits the ball. In swinging and hitting the ball there are several important points to remember: 1. The batter should use his normal stride, making certain he is not overstriding or understriding. 2. He should get his hips and legs into each swing. To accustom a boy to doing this the following exercise is of great value: Without a bat, have the boy assume a hitting position. On a given signal have him swing his hips and legs as if he were actually hitting. This point in hitting cannot be over-emphasized. 3. The boy should not swing hard and should keep his swing level, and 4. He should be sure to follow through.

Most of the leading sporting goods manufacturers put out very excellent batting tees. It is also very simple and inexpensive to build one. A few pieces of old pipe, a heavy base, a couple of used radiator clamps, and some radiator hose are all the materials needed to construct a tee. One of our squad members constructed our tee and we will gladly furnish instructions on request.

***JOSEPH R. COOPER** played varsity baseball at Western Michigan College for three years and also for the Grand Rapids Jets of the Central League for one year. He is also director of the American Legion baseball program in his locale.*

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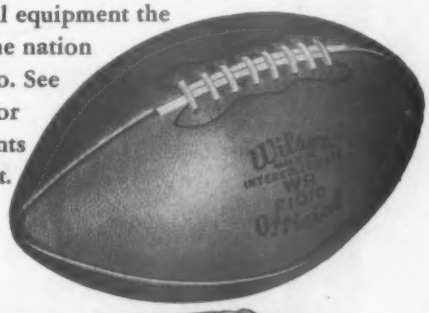

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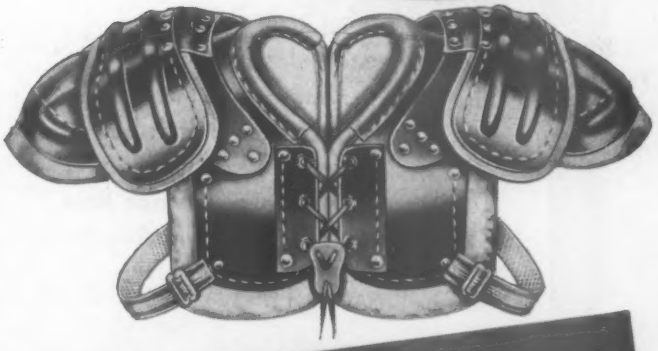

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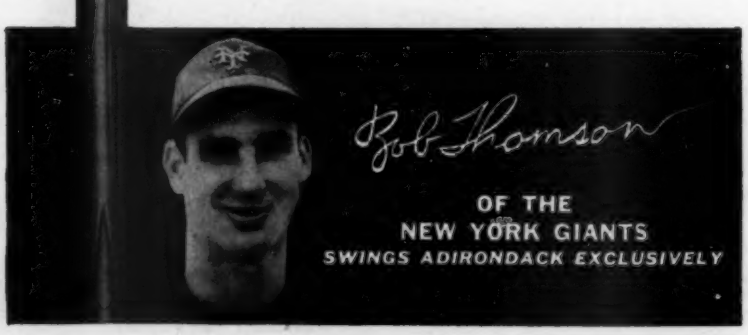

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A FORWARD STEP IN CATCHING

By JOSEPH E. TRUSKOWSKI
Baseball Coach, Wayne University

FOR A number of years the Wayne University catchers have been using a system of footwork in catching that is somewhat different from the usual practice.

In a discussion on catching at the recent Baseball Coaches Convention in New York City, I discussed the style that we have found to be quite successful. The comments made then, and the interest shown afterwards, have encouraged me to present it to this magazine.

A brief review of the current practice might be in order first. In this way a comparison can be made, and the individual reader can decide for himself as to the relative merits of each.

When a pitch comes directly over the home plate, the typical college catcher of today shifts his feet so that when he is ready to throw, his right foot is back and his left foot lands in front of it in a comfortable throwing position.

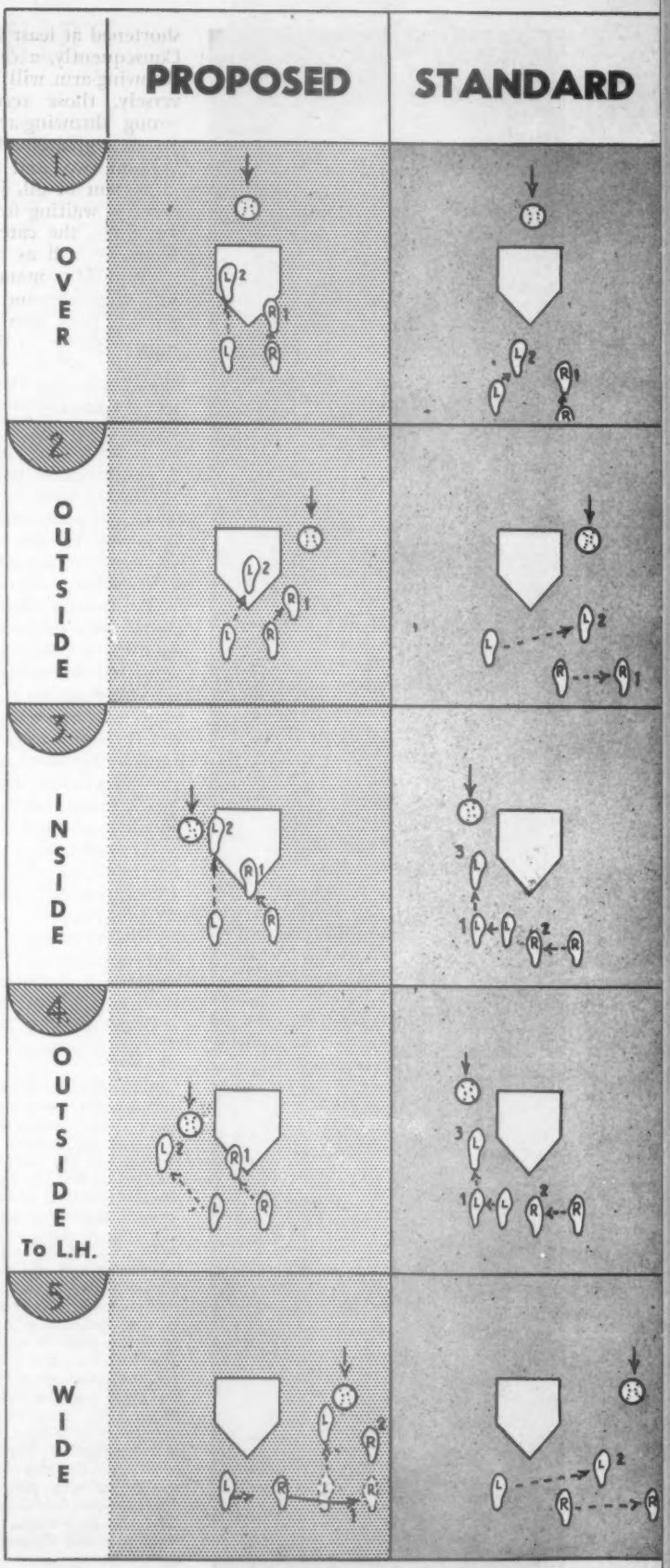
If the pitch is to the left side of the plate, the catcher moves his left foot laterally, and then brings his right foot to the left, a comfortable distance behind the left foot.

If the pitch is to the right, he shifts his right foot laterally to the right and brings his left foot up behind the right foot.

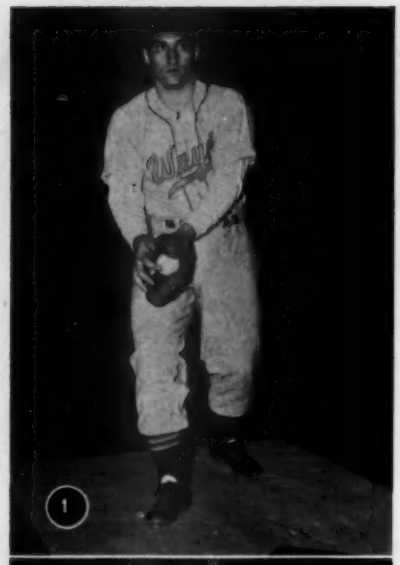
Each coach undoubtedly has his own variations to the above, but the point that is very evident is that in each case the beginning of the return throw is further back from the home plate than it need be. This point becomes doubly important if one realizes that the distance is reduced again if the ball is caught closer to the home plate and returned from that position. This means a saving of perhaps a stride and a half on the catch, and the same on the throw, or a total of three strides. In the case of an attempt to steal a base, this distance may mean the difference between a put-out or a stolen base for the opponent.

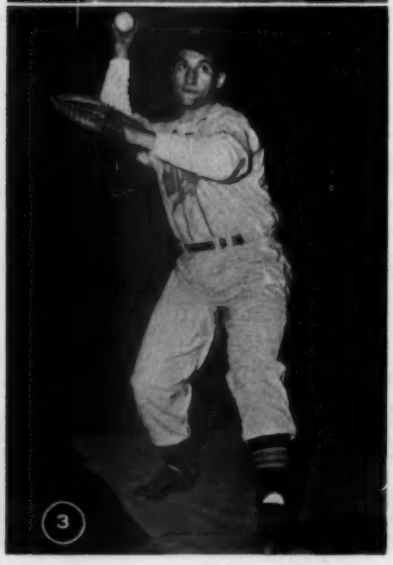
Another point apparent is that in the more popular methods, as advocated in most books on baseball, there is more jumping and/or shifting of the feet than is really necessary. Why make two or three movements of the feet to make a play, when one or two movements will do as good or better a job?

The footwork in catching that I have always taught our men has advantages that I feel cannot be overlooked. Number one is the fact that the throw is



(The explanation of the drawings which follows applies only to the proposed footwork shown at the right.) Ball Over the Plate: No. 1 step with the right foot as the ball is caught. Second step forward with the left foot as the throw is made. Ball to the Right: No. 1 step with the right foot slightly to the side as the ball is caught. No. 2 step with the left foot slightly to the side as the throw is made. Ball Inside: No. 1 step to the left with the right foot as the ball is caught. No. 2 step ahead with the left foot as the ball is thrown. Left-Handed Batter, Ball Outside: No. 1 step to the left with the right foot as the ball is caught. No. 2 step forward and to the side with the left foot as the throw is made. Wide Pitch: No. 1 skip step to the side. No. 2 step forward with the right foot as the ball is caught. No. 3 step forward with the left foot when the throw is made.





shortened at least a stride and a half. Consequently, a catcher with a weak throwing-arm will be benefited. Conversely, those receivers with extra strong throwing-arms will be given an even greater advantage.

Point two, and probably the most important of all, is the fact that instead of waiting for the ball to reach his glove, the catcher is striding toward the ball as it comes in his direction. This maneuver gets him inside the diamond and as a consequence puts him in a better position to throw to the bases.

Thus, we see that we not only can save on the distance the ball must travel from the pitcher to the catcher, but also on the fact that the catcher is moving into the throw when he is in the act of catching the ball.

Coaches who are troubled with instruction problems will find that it is easier to teach this method. A catcher can master the footwork in a few hours of practice.

To describe the footwork theory in detail let's examine briefly the various throws that a catcher must be prepared to make at any time. If the pitched ball is coming directly over the plate the catcher takes a step forward with his right foot and into the path of the ball. He times this step with the catch so that as he receives the ball, his right foot comes in contact with the ground.

He continues on with his step with the left foot while cocking the arm and throwing. This is one continuous movement. It is also easier if the ball is brought above the shoulder and opposite the ear for the throw, instead of throwing from the usual position of behind the ear.

If the pitch is to the outside to a

(Continued on page 58)

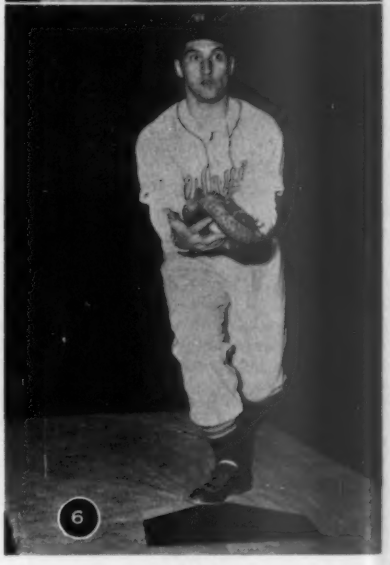


Illustration 1. If the pitched ball is coming directly over the plate, the catcher takes a step forward with his right foot and into the path of the ball. This is in contrast to the usual method of shifting the feet so that the right foot is back, with the left landing in front of it in a comfortable throwing position. Illustration 2. The step is timed with the catch so that as he receives the ball, his right foot comes in contact with the ground. Illustration 3. He continues by stepping with his left foot while cocking his arm and throwing. This is one continuous movement. Illustration 4. If the pitch is to the outside to a right-handed hitter, the same rule would apply, and the footwork would consist of moving the right foot forward and to the side at about a 45-degree angle from the left. Illustration 5. With a pitch to the inside of a right-handed batter, the footwork is practically the same as catching a ball directly over home plate. Illustration 6. With a left-handed batter and a pitch to the outside, the step again is forward with the right foot and diagonal to the direction of the oncoming ball.

Developing A Winning Miler

By CARL M. BONGE
Director of Physical Education and Athletics
Anderson, Indiana, High School

Continuing its policy of publishing track articles by coaches of outstanding high school athletes, the ATHLETIC JOURNAL *herewith presents an article on the training and conditioning of John Stayton who made the nation's best mark in the mile last year, as a high school performer, with a time of* 4:24.

TRAINING and conditioning a high school miler the caliber of John Stayton should entail some hocus-pocus procedures designed to produce miracles but this certainly was not the case. Practically the same training and conditioning schedules were used with Stayton that were used on every Anderson miler since 1936, when the writer became head track coach. These schedules are based on standard procedures of overdistance, underdistance, pace and speed work, etc. Over a period of years they not only have produced enough outstanding boys to make exceptionally strong track teams, but to give the school a reputation for producing outstanding middle-distance and distance men. Eight of the last nine Indiana state high school track and cross-country championships have been won by Anderson.

Before getting into the training procedures, it might be well to look over Stayton's record in the schedule below. It is remarkable that a fourteen-year old boy could, in his short time in high school, improve his time the way he did. It is more remarkable when you consider he had had no track experience prior to his entering high school, and each fall he was forced to start late in his cross-country work because of hay fever and asthma. Because he played basketball he got a late start in the spring, except in his senior year. He never had the advantage of indoor facilities. The gym floor was available only after basketball season, which often runs through the third week in March. Once he got started, however, he quickly rounded into shape chiefly because he could stand more work per day than most boys. As a beginner it was discovered that he was not only doing the freshman work schedule each day but the varsity as well. A prompt promotion to the varsity schedule was the result.

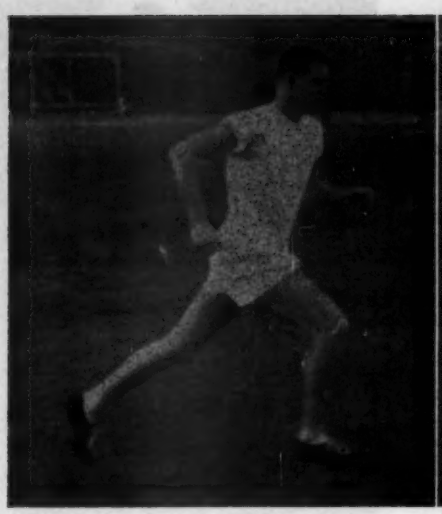
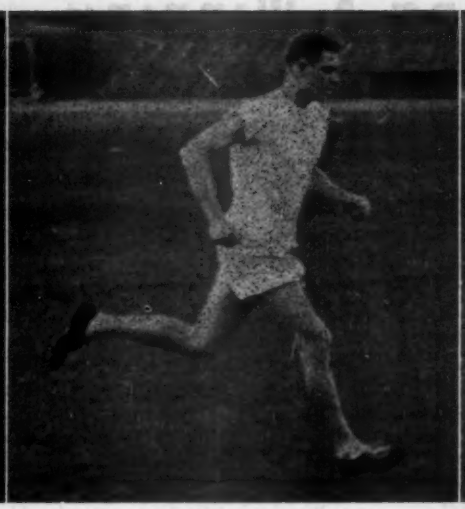
As a senior, John was seventeen years of age, five feet ten and weighed one hundred fifty-five pounds. His heavy chest gave him the appearance of being stocky. He did not play high school basketball this year, and when that team was upset in sectional play, track got started the first week in March. In his first and only indoor meet, John was defeated in the Indiana University Fieldhouse by another great Hoosier miler, Bob Eggleston of Washington, in 4:33. John needs no one to alibi for him, but it must be stated that he did most of his training on the gym floor (the early March cold air affected his asthma) and that he got up from a light attack of measles four days before the race. Below is the result of his 1949 efforts in the mile.

April 8 Muncie Central dual meet	4:27.8
[1]April 18 Indianapolis Tech dual meet	4:23.5
April 27 Marion dual meet	4:29.5
[2]May 4 Kokomo dual meet	4:22.5
[3]May 7 North Central Conf.-Richmond	4:20.5
May 13 Sectional at Muncie	4:42.7
May 20 Regional at Indianapolis Tech	4:29.3
[4]May 27 State at Indianapolis Tech	4:24

Here was a different problem. At a time when we were ordinarily getting started, we had a boy running under 4:30. The 4:20.5 mile was planned with the watches checked beforehand in anticipation of a new record. Imagine our disappointment to learn that the track, in a comparatively new athletic plant, was fourteen feet short! Stayton complained of a sore tendon sheath above the

1New Hoosier School Boy Record. Old record held by Don Lash, Auborn, 4:23.7, 1933.
2New Hoosier School Boy Record. Broke record of April 18.
3Short track (no record).
4New State Record. Old record held by J. Corridan, Wiley (Terre Haute) 4:24.7, 1943.

THE START. The wide elbow carry is clearly shown in this series. Although his hands swing close to his body, his elbows are naturally wide. This did not detract from the smoothness of his running form or even cause him to tighten up. Even on his "marks" his hands are wide.

outside left ankle bone after the race. It was too tender to work on the next week and with the sectional eliminations coming up, the spirits of our whole squad were at a low ebb. We had counted on John for ten points and perhaps a leg on the relay. John managed to jog a little on the grass on Thursday and Friday and to qualify on Saturday. A repetition of the previous week discouraged all plans of a national record and all efforts were bent to keep him qualified. He appeared better in winning the regional, but worse afterwards. By Thursday the soreness was so much better that he jogged some on the grass with no ill effects and repeated this light workout on Friday. With so little work over a three-week period it is a tribute to the determination and ability of this boy that he was able to set a new state mark.

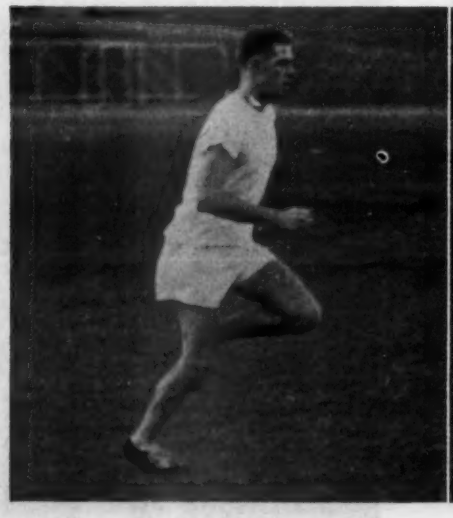
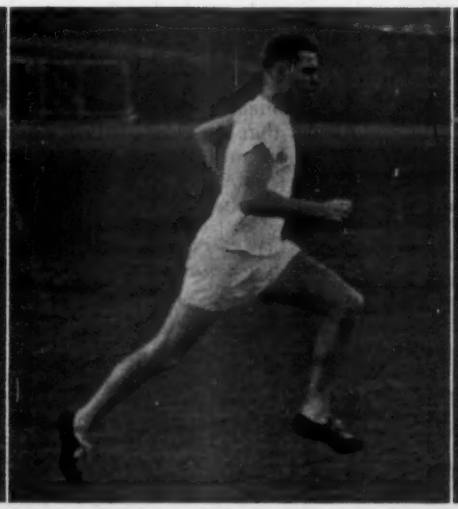
We never worry about the foot plant or stride of a boy as long as he doesn't pound flat-footed and has a reasonable knee lift. We want him to have good form if it can be obtained naturally. We feel that the stride will improve as the boy's strength increases. Rome wasn't built in a day, and we didn't worry too much about the fact that John was too erect and carried his elbows too wide.

In his junior year we cut his stride slightly, feeling that this would increase his speed. Apparently it did, but when we attempted what we thought would be a correct body lean, he couldn't get the proper knee lift, and he lost his speed. He is still too erect. It was the same with his elbows. From his physiological make-up it was just natural for him to carry them that way. He never tightened up in the upper trunk, so we quit worrying about his form and let him run.

As his experience and ability increased, so did his judgment of pace. Whether fresh or tired, his ability to run with the watch became uncanny. He seemed to always know exactly what he was doing. We have always been rather successful in instilling some knowledge of pace but John was tops, as he was in performance.

His speed was not natural but the result of hard work. In April of his sophomore year he was outkicked in the stretch in a special mile run. Al-

In the series of pictures shown on these pages the combination of muddy footing and rubber shoes caused Stayton to use a flatter foot plant that he ordinarily used and detracted from the power of his push-off. THE MEDIUM PACE (Shown above). This series shows his powerful leg drive and good knee lift. He is entirely relaxed. Illustration 2 might indicate that he planted his heel first but this is not true. Illustrations 4 and 5 show clearly how soft the footing was. THE FINISHING PACE (Shown below). Here his form is unchanged and he is still relaxed. More drive off the rear leg and a trifle higher knee lift (Illustrations 2 and 5) gave him a tremendous "kick" whenever he needed it.

though this was his last defeat in outdoor competition, it was the race that made him. Speed became an obsession with him and he really got results. Several watches caught him under fifty seconds on a leg of the mile relay in the state meet in his junior year.

Building up the strength of a beginner to the point that he can run a fairly good mile requires so many laps of practice that many get discouraged and drop out. During this period we attempt to keep up interest by checking arm carry, etc., and by time trials at a distance that he can carry. After we feel that the boy is strong enough, we check his time, set his goal, and put him on his own. We seldom time a boy for his actual race in practice. Our schedule is such that our big meets come on Saturday, with dual meets on Tuesday or Wednesday. The dual meets replace time trials and the personnel for the big meets is chosen then. Underdistance (¾ mile) is always paced and time set for each quarter. Overdistance is 1½ miles early and this is run for time. Later in the season this distance is cut to 1¼ miles, time set for the first four quarters and the last quarter the best that can be done. Before the N. C. C. meet, Stayton ran 62-66-67; continued with an easy 220 and then sprinted 220; a combination of pace and speed work.

We use a separate work schedule for each day's work. It is written up about two hours before each practice. Thus it can be made to fit the day's weather conditions and to meet the needs of the individuals as they were brought out in the previous day's practice. They are varied to the extent that the boys are anxious to see what the assignment is. Coaching hints, pep messages, equipment information, comments on the previous day's work, etc., are included on the schedule. We insist that our boys warm up with a half mile of alternate easy and hard running followed by 10 to 12 minutes of calisthenics. In the early season the calisthenics are taken in a group, and later individually. This is about the only part of the schedule that is closely checked.

The schedules given below are for the week previous to our Bloomington Indoor Meet the latter part of March and are for a six-lap outdoor track around the gymnasium. Stayton did not run Monday, and only lightly Tuesday.

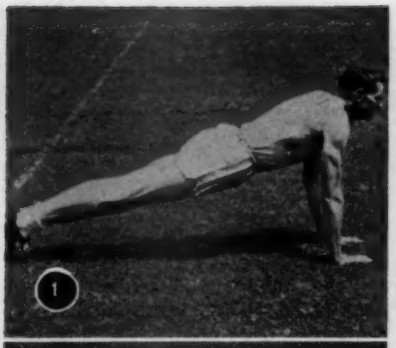
MONDAY

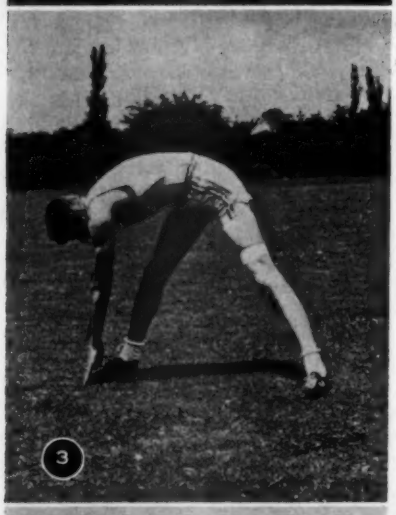
1. Warm-up and calisthenics.
2. One and one-half miles, running third, sixth, ninth laps at good mile pace.
3. 880 at 2:20 pace.
4. Two miles, first one and one-half miles easy, stretch out on last 880.

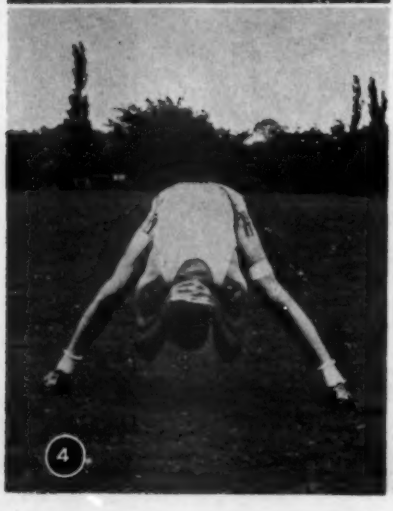
TUESDAY

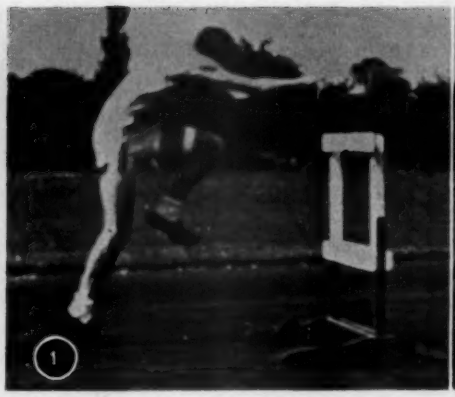
1. Warm-up and calisthenics.

(Continued on page 46)









The High Hurdles

By JOHNNY MORRISS
Track Coach, University of Arkansas

THERE is, at present, no book published which deals entirely with hurdling techniques, especially with teaching beginners. A coach must face many problems in selecting candidates who would like to be hurdlers. Some of these problems are easier to solve if a plan is developed and followed in selecting prospects and training beginners. The writer has had considerable experience as a competitor in the hurdles and as a high school and college coach. The suggestions which are presented here are the results of this experience and are offered as an aid in developing hurdlers.

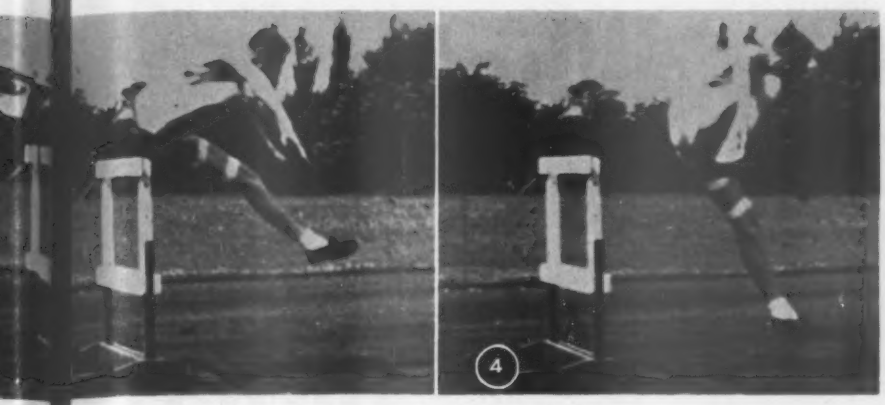
Selection of candidates may be handled a number of ways, but naturally the most difficult problem confronts the coach who must start from scratch. Since nearly every coach finds himself in this situation at some time in his career I would suggest that he get permission from the head of the physical education department or the principal to conduct a few tests.

The best three events to use in this test for hurdling candidates appear to be the broad jump, the high jump and the 100-yard dash. A hurdler must be reasonably tall, so the coach should take all of his tall boys and give them the above test. The dozen or so who make the best all-around results generally can be developed into pretty fair hurdlers, provided, of course, that they have these requirements: co-ordination, average amount of speed, good timing, intestinal fortitude and above all the will to work hard.

When this selection has been made, the problem of how to start the beginners arises. If a green man is put right to work on the hurdles, the chances are his immediate failures will discourage him. His desire to learn and curiosity about the hurdles should be kept alive until the coach feels the time is ripe to let him try to take a hurdle. To bridge the gap between the selection of the candidate and his first attempt at the hurdles, a rather thorough routine of preliminary exercise should be outlined. These exercises prepare the hurdle candidate for the actual event and school him in the fundamentals of hurdling. At their conclusion he has enough hurdling know-how to take him out of the greenhorn stage before he ever attempts to clear a hurdle. His first hurdling, therefore is likely to result in success, and if there is any better way of holding a boy's interest than success, we have yet to hear of it.

These exercises are fundamentally for hurdlers, but they are also very good for the entire track squad. It is suggested that they be taken daily by the entire squad during the early part of each day's practice. A lot of boys may not be able to take some

Illustration 1 shows an exercise to condition hand, wrist, forearm, arm, shoulder and stomach muscles. Illustration 2. This exercise is mainly to condition stomach muscles. Illustrations 3 and 4 are stretching exercises to condition stomach, back and legs. Illustrations 5, 6, 7 and 8 are hurdling exercises which every beginner and good hurdler should use to warm up with to loosen-up back muscles, stretch leg muscles and work on lead leg and drag-leg action.



Over the hurdle at a fast clip.

of the exercises over two or three times to begin with, but they should gradually build up until they can do at least ten apiece.

This is the time to teach track men good warm-up habits. They must be made to realize that better performances will come from correct warm-ups and exercises before going into competition. Muscles which are in tone, stretched and relaxed, always give a better performance.

Fundamentally, all exercises are given to develop the front leg or lead leg (leg that goes over the hurdle first); rear leg or trail leg (leg that is last over the hurdle); body dip or buck (thrusting of body and arms toward lead leg); and, arm action (double or single-arm lead). These hurdling terms should be remembered for they will be repeated many times throughout this article.

The exercises shown are not only for beginning hurdlers but advanced hurdlers as well. They are broken into two classes: general conditioning exercises and stretching exercises, and are for use by all hurdlers regardless of the extent of their experience. These exercises are specifically selected as an aid to developing hurdling techniques.

The general conditioning exercises are to occupy the beginners' full time, along with easy jogging, for the first four weeks. The prospect should spend about forty-five minutes daily doing these exercises and jogging. The two should be alternated. It is wise to have candidates alternate exercises and not do too many of the same ones at one time. The coach should be particularly careful at this time to keep his men from doing any fast work until they have had at least a month of background work. He should urge them to do their jogging as well as their flat exercise on the grass.

Bad habits are easily picked up, and once established, are very difficult to break. Good habits can be formed by beginners as readily as bad ones. If the correct principles are taught, they are never forgotten. Even a seasoned hurdler can tell what he is doing wrong but generally he needs suggestions before he can straighten out his difficulties.

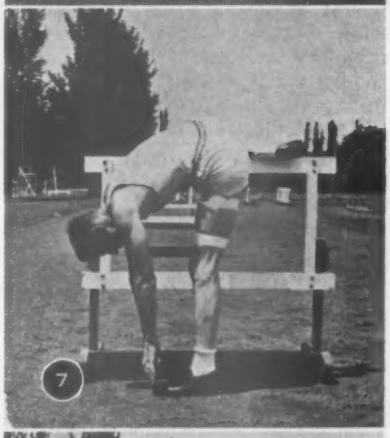
All of this may seem like a lot of preliminary work but it is definitely needed and will pay dividends with one's hurdlers.

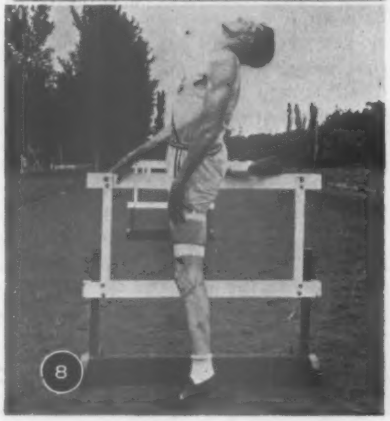
When a coach feels his boys are ready for over-the-hurdle work, particular attention should be devoted to body and arm drive, front-leg whip-up, back-leg drag, and above all, the timing and co-ordination of the balance arm cutaway. This can be accomplished by side-stride work and with five steps over the hurdle.

Let's assume the hurdlers are now ready for fast work. Hurdling is divided into six parts, the start, approaching the hurdle, the carriage

(Continued on page 59)

JOHNNY MORRISS graduated from Southwestern Louisiana Institute in 1930 and received a Masters degree at Louisiana State University in 1937. He lettered in football, basketball and track and was chosen the outstanding athlete at S.L.I. in 1930. That year he won the junior national AAU high hurdles and established a record of 14.7. He served as an alternate in the 1932 Olympics and in 1933 toured Europe with a picked American team including Cunningham, Metcalfe, Anderson, Spitz, Fuqua, McCloskey and LaBorde.





What's the Pitch?

By JAMES SMILGOFF

Baseball Coach, Taft High School

Chicago, Illinois

MOST batters anticipate what the pitch is likely to be as they stand in the batters box. Their mind is not a blank. They are thinking while batting. But what are their thoughts? What dictates these thoughts? Why should a batter expect a curve ball more than a fast ball under certain circumstances?

Good hitters are constantly studying the opposing pitcher. They intently watch any giveaway actions of the pitcher that forecast the type of pitch that will be thrown. They study the pitcher's pattern of thought.

Good batters hit from the time they leave the bench. When they leave the bench to select their bat they already have acquired a fund of knowledge which they are reviewing in their mind. For example, let us assume that we are facing a pitcher we have never seen before. The first batter at the plate is at a slight disadvantage because he has not had the opportunity to watch and study the opposing hurler. This is the main reason why so many lead-off hitters are waiters. They like to look at and study a few pitches before swinging the bat. The second batter, who is waiting to hit, should be very intent on studying the speed of the fast ball and the curve ball and the sharpness and size of the curve ball. Furthermore, he should notice whether the pitcher has a fondness for keeping the fast ball high or low. Is his control good when he pitches high and low, and mixes his pitches up, or does he have more difficulty in pitching to one spot than to another? Does he show good control of his curve ball? Does he throw a change of pace (slow ball)? All players on the bench should be studying the opposing hurler with these items in mind, plus any others that might prove helpful when they take their turn at bat.

When the lead-off batter comes to bat for his second turn he should have had the experience of watching the opposing pitcher pitch to eight other batters who followed him after his first turn, and the knowledge acquired in watching the pitcher hurl to these hitters should be his background for thought when at bat for the second time.

JAMES SMILGOFF played baseball at Lane Technical High School in Chicago and at the University of Wisconsin. After playing professional ball he became a farm-team instructor and scout for the Chicago Cubs. He has served as technical advisor for two movie shorts on baseball, and in 1946 was coach under Ray Schalk, of the United States amateur team. Last year his team at Taft won the city championship.

The reasoning behind the batter's thinking must be sound, at least sound enough to insure him fairly good success. The greater the intensity of study by the batter the greater will be his background of knowledge for a sound thinking-pattern for successful hitting. The thinking pattern in anticipating and diagnosing a pitch may be different for different players. This could be based on the individual's strength or weakness at the plate since this would influence the pitcher's thinking pattern in pitching to each individual player. For example: Ralph Cannon, formerly sports editor for the Chicago Herald American, once asked Ted Williams, "If we could find another player with your exact same physical proportions, strength, and eyesight; one who could be taught to use your exact same batting style to the minutest detail, would he hit with the same degree of success as you?" Ted Williams answered, "No, because our thinking pattern while at the plate would be different, at least part of the time."

Another example of the batter's thinking pattern in anticipating a pitch involves Hank Greenberg. Detroit was playing the White Sox and Gordon Maltzberger was on the mound for Chicago with Greenberg at the plate. Maltzberger wound up and threw a side-arm curve ball which Greenberg was not expecting,

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(he did not reason with this type of pitch in his thinking pattern) and as a result Hank was an easy out. A few innings later Hank was ready to take his turn at bat again. As he selected his bat, he turned to his teammates and said, "I'll probably get that side-arm curve ball again." Greenberg figured that since Maltzberger had been successful with the side-arm curve the previous time he would throw it again. Greenberg now stood at the plate trying to match thoughts with the pitcher so that he might anticipate the pitch. The pitcher wound up and threw a side-arm curve. Greenberg swung and the ball landed in the left field bleachers for a home run.

Not all thinking patterns will be that successful so quickly, but a sound thinking-pattern based on sound reasoning can raise a player's batting average.

The writer can well remember watching a major league game with an ex-major league player who, incidentally, was a ten-year man in the National league. As the game progressed toward its final inning, and the visiting team had been held to a few scrawny hits, he said, "The hitters just aren't getting with the pitcher." When asked what he meant by that statement, he said, "The hitters aren't thinking with the pitcher, or with the way the pitcher is thinking in pitching to them." In other words, the batters' thinking patterns were not fitting into the pitcher's thinking pattern or vice versa.

As players watch the opposing pitcher closely they gain knowledge of his ability. At the same time they gain experience on how to hit against that type of pitching. It is this experience in watching others hit against different types of pitching that gives the batter a broader foundation for his reasoning in working out a thought pattern.

After watching a pitcher pitch several games, and after having faced that same pitcher at least a dozen times or more, the batter should have a fairly good idea of what to expect from that pitcher, and he should know how to hit against him. The longer the period of observation and study the greater the knowledge, providing of course, that the observation is shrewd. Players who watch the game as spectators learn very little.

Most players take mental notes on different pitchers in their league. They can describe a pitcher's best pitch accurately, and they can give considerable information on his pitching pattern. Some players keep a notebook and make notes after each game concerning the sequence of pitches to the batter each time that he appeared in the batter's box. The writer knows of at least one major league club that employed a statistician who watched all games directly behind the catcher and kept a record of each pitch to each batter. This information was then given to the players who requested it. This was another method of getting knowledge of the pitcher's pattern so that the batter could have a background for his thinking pattern when he faced that opposing pitcher the next time. This helped the hitter in anticipating the pitch.

Some players like to think with the catcher's thinking pattern, preferably when the catcher is a veteran who is seldom shaken off on a pitching signal. In this particular instance the catcher's thinking pattern usually is the same as the pitcher's pattern. In other words, when the catcher and pitcher think alike, there is little disagreement between them on what type of pitch should be thrown. Thus, batters who know a catcher's thinking pattern are also apt to be in accord with the pitcher's thinking pattern, and consequently can anticipate the pitch to be thrown. Thinking with the catcher, of course, is less apt to determine the speed of the pitch.

In anticipating the pitch, the batter should also keep in mind the number of runners on base, the score, the inning, the number of outs, the count, his position in the batting order, and the wind conditions. All of these items, plus a few others not mentioned at this particular time, influence the opposing catcher's and pitcher's thinking and if the batter is to think along with them he will have to take these factors into consideration.

When there are runners on the bases the batter can usually expect more "stuff" from the pitcher since most hitters are better fast-ball hitters than breaking-ball hitters. Thus, pitchers who are in a "tight spot" with men on base are apt to throw more curve balls, slow balls, and knuckle balls.

For many years John McGraw, former manager of the New York Giants, and one of the greatest managers in baseball history, insisted that his pitchers throw curve balls with men on the bases. His pitchers were successful for years, and it was not until toward the end of his career that visiting batters learned his philosophy and began to think with him and his pitchers.

With no runners on base, most pitchers are apt to resort to the fast ball more often than when there are runners on the bases.

When the score is close most batters don't expect the fast ball too often unless the pitcher is behind on the ball and strike count. Relief pitchers are apt to have more "stuff" on the ball than starting pitchers. They have the advantage of knowing that they only have to pitch a few innings and, therefore, they don't have to pace themselves but can extend themselves and put all of their energy into each pitch.

In the early innings most batters can expect the fast ball to be pitched quite often since the pitcher is physically fresh and is trying to save some of his energy for the later innings should he get into a "tight spot."

With two outs and nobody on base, most pitchers will depend on the fast ball. What's more, they usually won't put too much on the ball since they are not in trouble and there is little likelihood of the opposition scoring as it will probably take three consecutive successful batters to score a run.

By intently studying the opposing pitcher, batters can see whether the pitcher has a tendency to throw curves or fast balls when the hitter is behind in the ball and strike count and vice versa. Some pitchers depend on one certain pitch almost exclusively when the count is two balls and no strikes or three balls and one strike on the batter. Hitters who know this can think with the pitcher and anticipate that particular pitch.

Some pitchers always waste a pitch with the count of two strikes and no balls on the hitter. Others decidedly refuse to follow this practice. This is valuable information to the hitter at the plate who is in an ambitious frame of mind trying to reason with the pitcher's thinking pattern.

The lead-off man, or those batting below the sixth spot in the line-up, can usually expect to see more fast balls than curve balls unless he shows the pitcher a decided weakness against a particular pitch.

The third, fourth, or fifth batters should practice hitting curves and other breaking pitches because the chances are that they will see plenty of them from rival pitchers during the season.

When hitting with the wind at one's back (the wind blowing toward

(Continued on page 47)

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The ATHLETIC JOURNAL

Nationwide Amateur Athletics

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JOHN L. GRIFFITH *Publisher*

High School and College Coaching the Same

THE Athletic Journal has always maintained that there is no line of demarcation between high school and college coaching. Why should there be when the games are the same? During the war years people raised their eyebrows when college coaches worked with seventeen-year-olds. Could these seventeen-year-olds be taught the intricacies of college ball? Again we say why should there be any undue consternation when the game is the same?

When high school coaches first started stepping into college spots, many raised the question of whether they were well-enough qualified for such responsibility. Again we say, why should there be any wonderment at the jobs these former high school coaches have done when the game is the same?

Is the game the same? Recent figures compiled for the American Football Coaches Association would seem to indicate that the difference between high school and college football offense is practically negligible. The statistics for 51 high schools and 160 colleges during this past fall are as follows: 1. Number of times carried the ball; high school 371, college 444. 2. Average number of yards gained from rushing, high schools 4.7 yards, colleges 4.19 yards. 3. Number of forward passes attempted, high schools 123, colleges 153. 4. Number of forward passes completed, high schools 53, colleges 67. 5. Average completion, high schools one in 2.7 attempts, colleges one in 2.3 attempts. 6. Average number of yards gained per completed pass, high schools and colleges both 15.1 yards. 7. The average number of yards per attempted pass for the high schools was 6.5 yards and for the colleges 6.6 yards. 8. The average number of passes completed in the end zone for the high schools was 5 and for the colleges 1. 9. The percentage of pass plays for the season for high schools was 24.8 per cent and for colleges 25.5 per cent. 10. The percentage of running plays per season for high schools was 75.1 per cent and for colleges 74.4 per cent.

The coaches themselves have long known the fact that there is no appreciable difference between the high school and college game. True, the more mature boy is physically stronger as a general rule, but as one coach said of his opponents, "They still put on their pants one leg at a time."

Athletics is considered a part of education, and coaching is a form of teaching. There is nothing unusual about a teacher conducting classes at both the high school and college level. We were recently discussing this matter with an English teacher who teaches in both the high school and the junior college. As far as she was concerned there was no difference in that they both misspelled accommodate, privilege, occasionally and procedure.

Coaches Are Not Different

PERSONALLY, we have always read Westbrook Pegler's columns, not so much because we agree with his thinking, but because we admire his forthright courage in presenting his views. This to us is a pleasant relief from the wishy washy writings of most columnists who always impress us as being afraid to express a strong argument one way or another for fear of losing some of their readers.

It has been some years since Pegler was a sportswriter and a few of the inaccuracies of his column of November 26 may be overlooked for that reason. However, we should like to point these out. Speaking of coaches he says, "at the age of 35 or 40 they find themselves outmoded, unemployed and busted." A study of 561 head football college coaches will disclose that 285 or 50 per cent graduated from college either in 1933 or before. Assuming that the average college student is 21 at time of graduation this would mean that half of them are over 37 years old. The average year of graduation for all 561 was between 1932 and 1933. Much is made of the fact that coaches are continually leaving the coaching field for other lines of endeavor. Pegler says, "Even these (coaches) presently go drifting into odd jobs selling athletic tackle, insurance or burial plots with petty sidelines such as jury duty with All-America boards, spotting for broadcasters and officiating for the pros."

(Continued on page 63)

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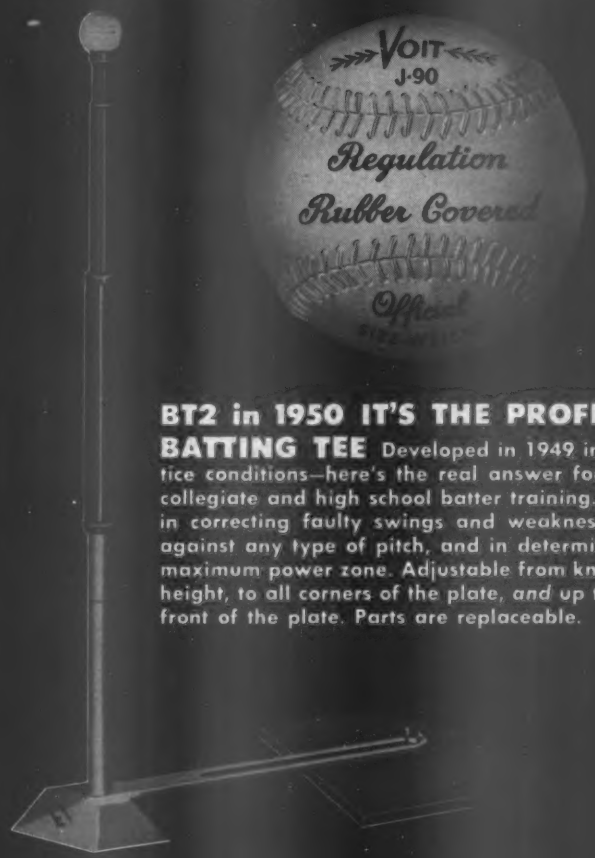

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Speed In Track and Field Events

By J. KENNETH DOHERTY
Track Coach, University of Pennsylvania

THE first of two articles concerning the significance of momentum in modern coaching of the field events in track athletics appeared in the February issue. It presented the argument that momentum is not only necessary to ultimate record performances but is also an essential part of good form and cannot be separated from it. This second article will advance the opinion that momentum throughout all phases of form is best taught quite early in the learning process.

For beginners, speed is secondary. No coach or beginning athlete should ever assume that speed is of primary importance during the first stages of learning his event. It seems quite obvious that, until an athlete has gained at least a fair mastery of the basic co-ordinations of his event, the speed with which they are performed should be definitely reduced. For example, in the shot put, until a man knows his proper position at the back of the circle, until he knows something of the nature of the shift, of the proper position of the feet, hips, shoulders and head, and the over-all action of the put, the speed with which these are carried out is secondary.

Teach speed as soon as possible. On the other hand, it is no longer true that attempts to secure speed throughout the entire action should wait until the various parts of the action have been perfected. An athlete may perfect the co-ordination of an event while moving slowly. He is likely, however, to lose this co-ordination almost completely when he speeds things up. It is therefore necessary in good coaching practice to introduce the element of speed as soon as possible in the learning process. That is to say, *once the basic co-ordinations are reasonably well-established, movement with speed should be a regular part of the daily practice schedule.* In the writer's opinion, best performance will thereby take place most rapidly and most efficiently when momentum is considered to be as fundamental a part of any given movement as the details of the movement itself.

It is undoubtedly true that where only a very short training period is present, for example, from April 1 to June 1, of any given season, the element of speed must be kept at a secondary level. However, with our modern collegiate tendency to work approximately nine months of the year, a different approach can be made to the problem. For a few weeks or even months, it may appear that progress in any given event, using speed, may be less rapid, but over a longer period of time, improvement will be found to be most efficient and best possible performance most certain. As the best high school athletes almost inevitably follow the trend toward greater time given over to training, and as they attempt to secure greater perfection in their events, they will undoubtedly follow this same pattern of organization of practice.

One should not practice for height alone. The policy of seldom jumping for height or throwing for distance during practice sessions is a very sound one. The emphasis in practice should always be upon learning and improvement, not upon maximum performance. On the other hand, the opposite policy of keeping actions *slow* and *easy*, while concentrating on form, is certainly not a good one, *for slow actions can never have good form.*[1] A very worth-while compromise is to permit the athlete to run fast in the high jump, turn quickly in the discus, etc., but to insist that he keep his attention on how and what he is doing, not upon height or distance. He may jump close to "meet" heights, run in the javelin or pole vault at "meet" speed, *but should concentrate on form.* This will permit a true learning of "meet" form, of form with speed. Having learned such form with speed, all the athlete needs to add on Saturday is a little adrenalin, confidence, and control.

Height should be practiced for form. There are many important aspects of this "practicing for form with speed but not for height or distance" which need discussion. In the high jump and the pole vault this means keeping the height of the bar at something *less* than but still *close* to the athlete's best height. He will then execute his jump with "meet" speed and style. His attention however should always be on proper form, not upon clearing the height.

In the high jump, however, much practice is necessarily done at low heights of the bar. In the old "scissors" and "Eastern" styles, this was all right, for the form demanded jumping vertically for height. In the "Western" and "straddle" styles, this is not the case. Form here is considered almost exclusively in terms of economical clearance of the bar. Working for form is taken to mean lowering the head and shoulders or twisting the second leg and hip. On the contrary, good form ought also to mean a proper run with useable speed, which, combined with a proper take-off, will bring a maximum height in the air. This is even more important than lowering the center of gravity, yet it is often completely ignored. After all, it is the run and take-off that clears 5 or 6 feet, the style of clearance brings only additional *inches.*

No matter how low the bar, a man should consistently run at the best speed he is likely to be able to handle during the coming season. Again, no matter how low the bar, he should always execute his take-off as though the bar were higher than his head. He should make his take-off, not "for height," but trying for greatest height, with his attention on jumping up to an imaginary bar, not upon jumping down to the actual bar. Only after a man has fixed the habit of jumping *up* should primary attention be given to clearance. In this way, he is always running at "meet" speed, taking-off

(Continued on page 48)

[1]In the first part of his article appearing in the February issue, Mr. Doherty states his two-part thesis as follows: "(1) momentum is not only necessary to ultimate record performances but is also an essential part of good form and cannot be separated from it, and (2) momentum in the execution of a field event is best taught early in the learning process." For full exegis of this argument see the article in the February issue.—Ed.

KEN DOHERTY graduated from Wayne University in 1927. He was national decathlon champion in 1928 and '29. He was assistant track coach at Princeton in 1929-30, and served in the same capacity at the University of Michigan from 1930-39. From 1940-48 he was head track coach at Michigan during which time his teams took seven out of a possible 18 conference championships. He went to Penn last year.

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Individual Styles In Baseball

By THOMAS CUOZZO
Baseball Coach, Lincoln Park, Michigan, High School

IN baseball, as in any sport, there are many ways of adjusting to individuals. There are two guides to help us. First we must know the proper way of doing it, the standard or norm; we have a set pattern to guide us, a starting place. Secondly, we know that individual differences are found in our players.

There is no necessity to state the various styles of play of the major leaguers. The important factor is to know how to adapt this knowledge for use with high school players. All high school baseball players have their heroes and desire to emulate their habits. It is the duty of the high school coach to explain why this is not always possible, and why a change must be made.

I have found it more expedient to vary my coaching techniques, whenever necessary, to adjust to individual differences.

One of the most perplexing problems concerns itself with the play of the second baseman on a double play. There are many variations of this play and the play I use depends not necessarily on what I want, but which one of my boys can do the best. At present, I have my second baseman hit the inside corner of the bag with his left foot, step off with his right foot towards the pitcher's mound, and finally end up with his left foot pointing toward first, making the throw as he steps toward it. As in all plays of this type, he must be sure to get out of the path of the base-runner. This play is difficult since the foot must hit the bag at the correct time. This particular play calls for an excellent shortstop, as well as second baseman, because of the accurate perfectly-timed throw necessary.

A variation of the double play is for the second baseman to hit the bag with his left foot, pushing off with it, landing on his right foot and making the throw while stepping toward first with his left foot.

Still another variation I have used is to have the second baseman hit the inside corner of the bag with his right foot, stepping off with his left foot and then his right toward third, and making the throw while stepping toward first with his left foot.

Another variation is to have the second baseman straddle the bag, drag his right foot across the bag and make the throw. I have used these and others and cannot say that any one style is best. Again it depends on the individual differences of the players.

Another element of baseball in which individual differences are discernible is batting. Here too we have a set pattern to guide us. When we have presented the correct pattern, we make our adjustments from that point. The adjustments from this pattern may involve only the length of the stride. Then again, it may involve changing the position and stance in the box, the position of the elbows, the grip on the bat—a choke or full grip. The intensity of the swing may have to be modified. The coach should make whatever changes are necessary, not just to make changes, but to fit the individual differences.

THOMAS CUOZZO has been at his present position for eight years. During four years of league competition his baseball teams have won the league championship once and tied for it the remaining three years. Over eight seasons his teams have won 73 per cent of all games.

In the play of the various defensive positions, it is necessary to consider how much ground a fielder can cover, and the strength of his throwing arm before he is given a set position on the field.

Outfielders differ in their ability to go back after fly balls. If a player can go back in fair shape, he can be stationed in closer to the infield and thus will cut off many "bloopers" and "Texas Leaguers" that the infielders cannot play. If the outfielder is weak in this department he must be stationed deeper than I would normally desire.

The stationing of the infield also depends on individual differences, such as starting speed, ability going to the right or left, the throwing arm and reaction time. A third baseman who can cover ground to his right may play further away from the foul line. It may be desirable to shift the whole infield to their left because of this one asset in the third baseman, or it may be used to cover a weakness in another infielder.

Many times a pitcher is a poor infielder and this must be compensated for by having the other infielders assume additional responsibilities. Rather than have a poor fielding pitcher "boot" a play, I prefer to have the infielder make the play and adjust from there.

I have had teams which I have been unable to teach how to bunt. Therefore, it was often necessary to "hit away", sacrifice, or steal to get a man in scoring position. Many times I have been asked why I don't use the "hit-and-run" play. The answer is simple, I just have not had the players with the ability to carry out this assignment, and I believe that this play is too difficult for the average high school player.

Another factor to take into consideration when thinking of individual differences in baseball is base-running. It demands a player with sliding ability, a fair amount of speed, and the know-how to get the jump on the pitcher. Some players cannot learn and must be left on base in hope of hitting them around. Other plays fail in a tight situation and must be substituted while they are on base.

The mental as well as the physical factors must be taken into consideration. An excellent illustration of this may be found in base-stealing. A player may well have a mental block against this phase of baseball, but the coach can often overcome this by explaining the physical assets the player has and put him in the proper frame of mind for base-stealing. In another player this approach may not work. Not every player in high school can learn every phase of the game. Lucky is the coach who has a squad made up of such players. If a player cannot bunt, should he be left out of the line-up? If he comes to bat when a bunt situation arises early in the game should he be benched, permitted to make an effort at bunting, or hit away? I myself would let him hit away or put the steal sign on. If a slow player is on second base, one out, a good hitter

(Continued on page 56)

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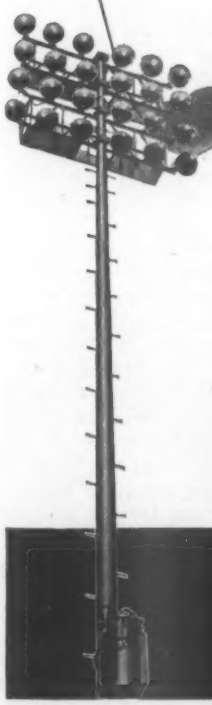

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Conditioning A High School Hurdler

By TONY JUSKA
Track Coach, Bradley University

Jim Philbee made one of the best high school marks in the high hurdles last year with a time of 14.5. Tony Juska, who was Philbee's coach at Manual High School, Peoria, Illinois, before going to Bradley, discusses the conditioning procedures he used with Philbee.

PHILBEE has the ideal qualifications for a hurdler. Jim is 6' 1" in height, runs the 100 yards in 10.3, is a well-muscled, tall athlete of 180 pounds, and has a very modest disposition. His speed helped him gain high honors in football and basketball.

Philbee and I absorbed one important fact from the 1949 Illinois State Track Meet held at the University of Illinois in Champaign — we learned never to attempt something not practiced in competition. Philbee, winning the two trials in the highs without being pushed in 14.5 seconds, decided he could secure a rolling start on the starter. The gun was not fired when Jim anticipated it would, and he relaxed for a split second. The gun barked. Not only was Jim late in starting but the surprise made him tense and worried, instead of being relaxed. Philbee placed third and his time was 15:1. From now on my good boys will always give full concentration to the bark of the gun. The only time such a step may not be feasible is when a coach definitely knows his runner is not the fastest man in the field. In the lows, Philbee won his trials with a 22:7, and a 23:2, but placed fourth in the finals.

At Manual High School, Peoria, Illinois, last year, we began indoor track practice as a group a week after the climax of the basketball season, which was the second week in March. Every boy was given the following letter at the first meeting.

TO ALL TRACK CANDIDATES:

I will demand that every track candidate get — and stay — in condition, and will dismiss any individual who shows signs of continued dissipation. Also, I will demand attendance of all for every practice.

You men know that excellence in athletics comes through *hard work, perseverance,* and *conditioning.* There are no short-cuts to success, and the problem of training must be faced squarely. By following the health rules an individual is laying the foundation that will enable him to tower over the mediocre.

Only through training is it possible to realize one's maximum potentialities. It makes no difference how much a person may want to perform or how much he may desire to excel, he is limited by the condition of his own organism. The will to do is an admirable trait, but the body can respond only to the point to which it has been trained.

It has been said that the greatest of all virtues is self-discipline. If you can't discipline yourself, you lose self-respect and confidence in your own mind and among friends.

Please keep the following axioms in mind:

1. Never be satisfied with mediocrity when you have the ability to perform creditably; if whatever you are doing is not worth your best, don't do it.
2. If you can't be a winner, make the fellow ahead of you break a record.
3. Don't think you're good enough to get by with less than your best; no one ever was nor ever will be that good.
4. Analyze your faults and correct them.
5. Get the will to do well.
6. The coach's criticism is never personal.
7. A quitter never wins; a winner never quits.
8. Be a good student of track by studying it.
9. When the season is over, look back and be able to say, "I gave my best all the time."

A winning team must have the entire squad working together. Never carry a grievance on or off the field. Be man enough to see the coach.

Sincerely,
Coach Tony Juska

Regardless of ability, we stressed physical condition first, then fundamentals. Also, we felt group work would develop team spirit and get the boys into better condition while under close supervision. The group calisthenics were designed to build the stomach muscles and stretch the others; such exercises as inverted jack-knifes, push-ups on finger tips, sit-ups, hand-stands, etc. After every fifth exercise everybody would jog (sometime skip, run backwards, etc.) to the right for several minutes. Thus we did plenty of running which broke the monotony of calisthenics. To develop leg power and endurance we ran up and down the hall stairs.

Movies of outstanding track men were frequently shown to the boys for the purpose of studying form. Articles on track were issued for reading while the boys were in study-halls. Pictures, diets, weekly practice plans, were placed on the bulletin board.

We teach the hurdler everything we teach the dash man in regard to form and starting. Then we discuss the two important factors of straight-leg action and keeping low. The hurdlers job is to leave the ground, clear the hurdle, and get back on the ground as soon as possible.

We worked on Philbee's stride so that it was natural for him to take his steps between hurdles without any effort. This was accomplished through continued practice. As for marking the take-off and cut-down over the hurdles, we paid little attention to it because it was felt every boy varies in stride and that the extra worry about the steps would slow the boy at the hurdles. We impressed upon Philbee to drive over each hurdle and not to slow down.

To develop form early in the winter, Phillbee placed two low hurdles five yards apart and placed a bamboo pole between them. This was to avoid any injury. Any lath, cloth or string also serves the purpose. Later, we would place an inch stick or tack some paper an inch high on the hurdle and Jim would strike it going over the hurdle. Thus we knew that he was not going over too high. We did the same thing for the first week of outdoor practice. Philbee always practiced on the grass of the football field in order to take the strain away when taking off and landing, thus saving leg power. Jim also had sponge in the heel of his front foot and an elastic sponge football knee

TONY JUSKA graduated from Purdue University in 1939 and took his Masters degree there in 1947. He served as assistant freshman track coach for one year before becoming coach at St. Mary's High, Michigan City, Indiana. Following the war he was appointed coach at North Side High, Fort Wayne, Indiana. He coached at Manual High, Peoria, Illinois last year.

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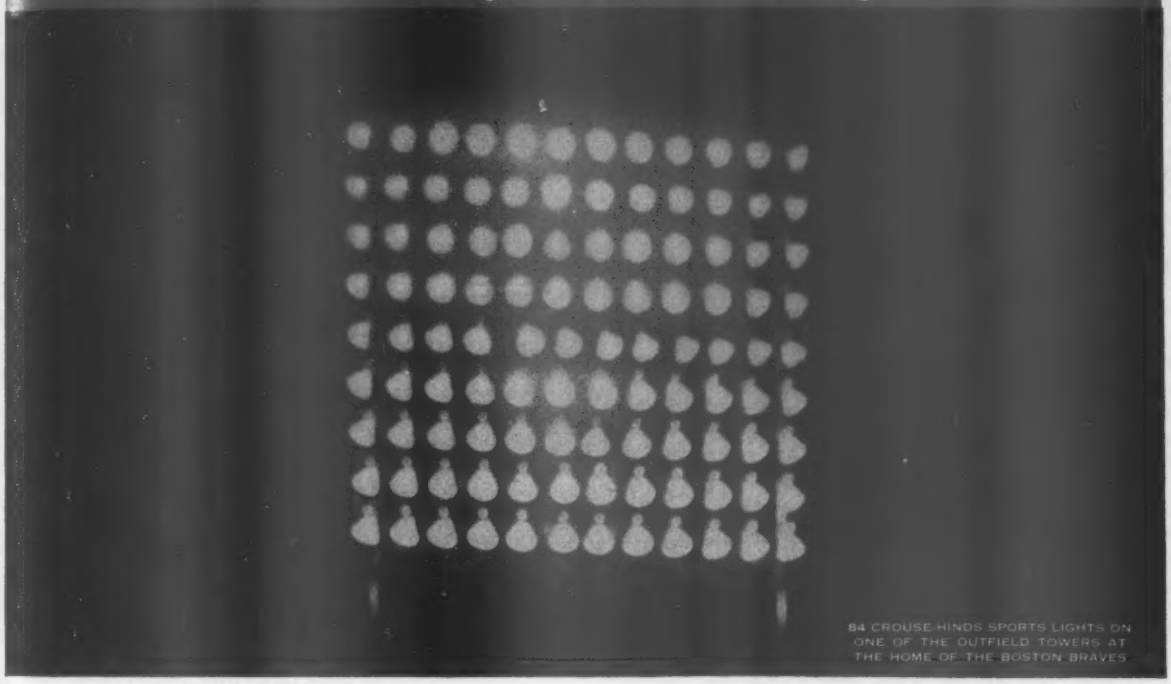

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pad on the back knee and ankle.

When it rained we practiced for a half hour at nine-tenths speed. This was to prepare the boys for anything during a track meet and to eliminate any alibis.

Philbee was given a hurdle to take home with instructions to do the following things:

Morning Exercises (fifteen minutes.)

1. Raise heels from floor while standing on a book (develops ankles). 2. Stretching exercises. 3. Stomach exercises. 4. Bending exercises.

Spare Time Exercises

1. Practice on take off, cut down and balance in the basement or yard.

Indoor Track Program

The indoor track program extended from the second week in March to the first week in April and comprised the following:

1. Roll call.
2. Jog around the school building (three blocks).
3. Discussion about track fundmentals, diet, training, etc. 5-10 minutes.
4. Calisthenics — thirty minutes first two weeks, 20 minutes the third week.
5. Run up and down stairs for leg power and endurance.
6. Everybody on chinning-bar and some rope-climbing.
7. Break into individual groups for 30 minutes.
8. After individual work, all jog around school building (three blocks).

Individual Work Done By Jim Philbee: (Approximately 30 minutes)

1. Skip rope: ten minutes (left foot then right: both, and regular skipping)
2. Run in place, extra high knee-action to develop leg speed and stride.
3. High leg kicking over the head: right foot, left foot, then alternate.
4. Dips on parallel bars.
5. Lie on back, arms at side, shoulders level. a) Kick right foot to left hand and return. b) Kick left foot to right hand and back.
6. Feet together and parallel, knees straight, body flexed at hips, back round so that hands touch floor. a) By series of short steps with hands, advance on floor, keeping heels on floor as long as possible until body is in prone position. b) By short steps with feet progress toward hands. Steps four inches long.
7. Weight on right foot and right hand, body straight. Raise left leg and left arm high as possible. Reverse sides.
8. Squat-jump: From full squat position, jump high in the air spreading legs outward and upward, touching toes to hands. Return to squat position; ten times in rhythm.
9. Swing arms back and forth vigorously. This is done to break habit of swinging arms across body which causes loss of time and energy.
10. Stand on right side of hurdle and swing left leg rapidly over it. This depends upon which foot is the lead foot. Have another object to balance self.
11. For development of trunk. a) Trunk bending sideways, around, reverse. b) Side leaning, lift right leg sideways fifteen times, change. c) Lunge forward obliquely. Touch toes with hands, up, reach backwards with hands over head. Back and forth.
12. Standing ten feet apart, throw medicine ball above head to a partner.
13. Rest the left leg on top of the hurdle and bend trunk forward far as possible. Reverse.

Please remember these exercises varied from day to day to keep within a half-hour period.

Outdoor Track Training Program

GROUP WORK:

First week mainly jogging, walking, calisthenics, and review of fundamentals.

1. Walk 440 yards.
2. Walk backward 440 yards (vary: one day goose-step, another skip, etc.,)
3. Roll call.
4. Discussion and information in regard to track.
5. Calisthenics: fifteen minutes. (Shorten to five minutes as season progresses.)
6. Separate for individual work.
7. Everybody always finishes practice with an 880-yard walk. Emphasis placed on leg reach and arm swing.

Individual Calisthenics Done By Jim Philbee Everyday Outdoors:

1. Bending and stretching to relax, loosen hips, and crotch.
2. Sitting on the ground in an "Over the hurdle" position, rock back and forth from the trunk up.
3. Inverted hurdling, executing the first eight strides, lead with one leg and trail other—strides between hurdles—to develop cadence.
4. Bicycle and splits.
5. Indoor exercises No. 5, 6, 7, 9, 10 and 13.
6. Goose-step and toe the line with high knee-action for 100 yards.
7. Knee bending and bouncing exercises.
8. Hopping on one foot, then the other.
9. Skip around track.
10. Raising up and down on the toes.

A Typical Training Schedule For Philbee (45 to 60 minutes)

Done after group and occasionally varied. When he was tired the work was cut in half.

MONDAY

1. Calisthenics: ten minutes.
2. Five times over one hurdle (five lows first, then highs) nine-tenths speed.
3. Five times over two hurdles (five lows first, then highs) nine tenths speed.
4. Run a 220 in a relay race-rest-repeat.
5. Walk 880 yards — shower.

TUESDAY (Hardest work day)

1. Calisthenics: ten minutes.
2. Five times over two hurdles (five lows first, then five highs) full speed.
3. Five times over two hurdles starting with sprinters alongside—Gun start (five lows first, then five highs)
4. Full flight of hurdles.
5. Five minutes work on stride, cut, and take-off.
6. Run a 220 in a relay race.
7. Walk 880 yards — Shower.

WEDNESDAY

1. Calisthenics: ten minutes.
2. Five times over three hurdles (five lows, then five highs). Full speed.
3. Five minutes work on stride, cut and take-off.

F. Five times over three hurdles alongside sprinters (five lows first). Gun start.

5. Run in a 220 relay-rest-repeat.
6. Walk 880 yards — Shower.

THURSDAY

1. Calisthenics: ten minutes.
2. Walk around track 440 yards.
3. Several baton passes.

FRIDAY: Meet.

If the meet is at 1 P. M. combine breakfast and lunch not after 10 A. M. Handful of brown sugar one hour before meet.

1. Walk around track.
2. Calisthenics: five minutes.
3. Jog 220; walk 220.
4. Get liniment rub on legs to keep glow.
5. Go over two or three hurdles at one-half speed several times.
6. Adjust starting blocks.
7. Several trials over first two hurdles.

Tips From Philbee on Hurdling

1. Keep legs alive and full of spring.
2. In practice, use five yard lines on the football field for developing stride; take two for the five.
3. Do stretching exercises every day.
4. Dig and pull low with lead arm.
5. Never cross arms in front of body.
6. Eyes on the next hurdle.
7. Keep forward lean on the highs.
8. Practice for form, for speed, and for endurance.

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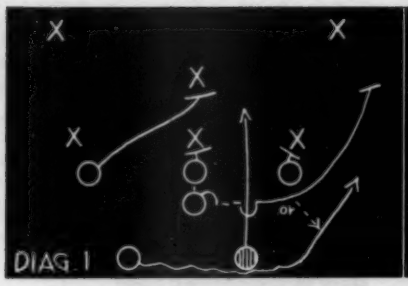
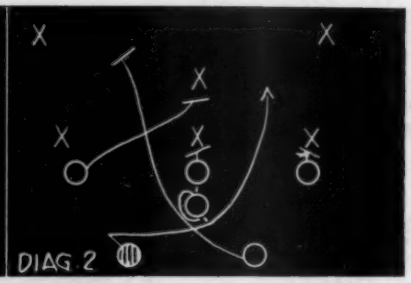




Six-Man Is Real Football

By LOUIS HANSON

Coach, Basile, Louisiana, High School

MY THEME is that six-man football is *real* football. Because of the comparatively short history of the game there are many who are not familiar with its possibilities and future. There is a need for an expanded publicity campaign. In the past there have been many schools inaugurating six-man football, calling on basketball coaches and others without sufficient football background to take charge of the program. Of course this situation has come about through necessity because of a shortage of coaches and many of these schools have done well. However, with each passing year we will have more competent football men entering the six-man field. This will gradually bring about better teaching of fundamental skills and thus raise the standard of the entire six-man game. Good blocking, tackling, passing, and running are just as necessary to this game (which often completes the athletic program of the small school) as to the regular game. Six-man must have a firm foundation, as evidenced by the large number of schools now playing it and the increasing number of new schools each year inaugurating it.

In regard to the administration of the game, I agree with Mr. Ray Duncan, head of the State Department of Health and Physical Education in Illinois who states that the rules should be brought as near to those of eleven-man as possible. The only necessary changes are a smaller field and fewer men. Six-man will take a great step forward when coaches begin to explore its ultimate possibilities rather than use it as a stepping stone to the eleven-man game or to better positions for themselves. Remember, I am thinking of it as a game for the small schools and transition should be made to the eleven-man game whenever enrollment permits.

Many college coaches have stated that they are as glad to get good six-man high school players as they are experienced eleven-man boys as long as they are as well-grounded in fundamentals. At present there are many former six-man players doing well on college gridirons. Ken Konz, first string Louisiana State University quarterback had only six-man experience in high school.

LOUIS HANSON graduated from Louisiana College where he lettered in football, basketball and baseball. He received an M. A. at Colorado State College of Education and played one year of football there on a team that won the conference title. His six-man teams at Basile have won 18 of 24 games. His basketball teams have won 30, lost 8.

Here in our small town there are quite a number of men with college football experience and they frankly state that they would rather watch a good six-man game than an eleven-man game. For the ordinary fan the good features of football are more easily seen and understood in six-man.

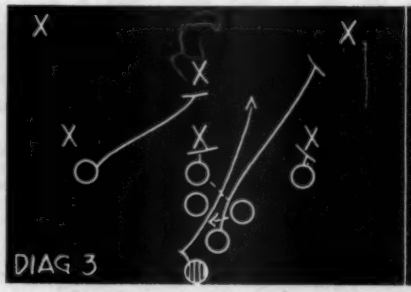
In my first year of coaching neither I nor any of my boys had witnessed a six-man game. Frankly, we had a tough time but ended the season by winning two and tying one of the last three games played. I have always used the T formation with the quarterback up under as in regular eleven-man. I believe this allows my plays to hit quicker and presents the opportunity for more deception and hiding of the ball. We work a great deal of faking as with an eleven-man T and many times it has paid off by fooling the defense completely even though the clear pass is necessary before the ball may be carried across the line of scrimmage.

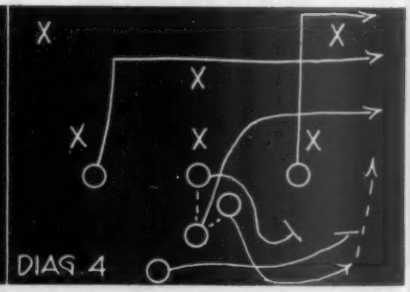
Last year, because I felt that we did not have time to train a boy to handle the quarterback position well enough, I instituted a single wing attack to supplement many of my T plays. We shift from the T to the single wing or we hit quickly from the T itself. Our basic T plays are quick-openers and we follow them up with pitch-outs from the same pattern. In Diagram 1 is shown our quick-opener and pitch play. Ball hiding and empty fakes make these successful. As soon as the deception has caused the defense to lean, the quarterback and left halfback immediately pour on speed to carry out blocking assignments.

In Diagram 2 is our cross-back play which is also a favorite. This year I am attempting to use brush blocks on certain quick-hitting plays. In this case our left end may drive the defensive right end out until the ball-carrier hits the hole and then he will hurry to make an attempt at the halfback. This will work when fast backs are available. We also use a man in motion on most wide plays in order to be sure of getting a good defensive end, or against a 2-3-1 defense.

In Diagram 3 is one of our strongest inside plays. The ball is snapped to the short man who executes a reverse spin and fakes to the center man driving into the hole. He gives the

(Continued on page 47)





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Championship Form in the Low Hurdles

By JOHN A. BAY
Track Coach, Stillwater, Oklahoma, High School

Bill Williams ran the low hurdles in 22.2 last year to score one of the best high school marks in the country. In this article his coach analyzes Williams' winning form and his conditioning routine.

THE training and conditioning of Bill Williams, Oklahoma's 1949 low hurdle champion, was determined by a number of factors. Each determining factor can be placed under one of the following four headings:

(1) Characteristics of the individual.
(2) Previous track experience.
(3) Events to be competed in.
(4) Weather conditions during competition.

We feel that these things have to be carefully considered before a plan of training can be prescribed for any track man.

Characteristics of the Individual

Bill Williams is 5 feet 10 inches tall and weighs 150 pounds. The first thing we noticed when we saw Bill run was that he is quite bowlegged. This did not seem to handicap him any in clearing the barriers, but since there is little in such a leg structure that is beneficial to running, we were constantly at work attempting to improve the efficiency of his leg action.

Bill had another physical characteristic, however, which gave us far more trouble than his bowed legs. He generated his speed slowly as is indicated by marks he posted in various flat races prior to or during the spring of 1949: 100-yard dash: unofficially in 10.3—quite consistently in the official time of 10.5. 220-yard dash: officially in 22.0. 440-yard dash: 52.2—unofficially as lead-off man on our sprint-medley relay team. 880-yard run: officially in 2:00.7.

Bill spent more time on work designed to remedy this situation than was spent on any other type of work.

Previous Track Experience

In regard to past experience in track, Bill had a background of three years of running in cross-country. In spring track he was primarily a middle-distance runner with the half mile his specialty. During his junior year he attempted to run the low hurdles but in doing so injured his right foot on a hurdle and had to stop work on them after only a few weeks of training.

Events To Be Competed In

We switched Bill from the half mile to the low hurdles for several reasons. First of all, he showed a great deal of enthusiasm for hurdling and definitely had some ability in that event. Secondly, we were weak in the hurdles, whereas in Charles Pock, a junior, we had an exceptionally fine-looking middle-distance runner.

Track at Stillwater High School has been greatly handicapped by a lack of manpower. Because of this and the fact that Bill was very versatile, it became almost imperative that he compete in other events besides the low hurdles. With Bill and Pock available to handle those big quarter- and half-mile legs on the sprint medley relay, we knew we could find a strong team in that event. Also we had two other pretty fair half-milers so the two-mile relay was a possibility. This all meant that Bill had to be ready to run any flat race up to and including the half mile as well as prepare for the low hurdles.

Weather Conditions During Competition

One last thing must be considered before talk about a training schedule can begin—that is the weather conditions that may exist during the competitive season. The weather in Oklahoma is quite variable and may change almost without warning. Although the worst weather is expected during the early part of the season, strong winds and rain are a possibility throughout the track season. In the course of a season we may expect one meet in cold weather, a few on rainy or damp days, and several during days when the wind exceeds ten miles per hour and is possibly as high as 20-25 miles an hour.

We run the majority of our meets in good weather, but a track man running in this section of the country must be prepared to withstand the extra strain put on the body and leg muscles by wet tracks, cool weather, and windy days. This is especially true in hurdling where the correct number of steps have to be made between barriers no matter what the track or weather conditions are. The only way to do this is to be in excellent physical condition.

With this information well in mind we were ready to begin planning Bill's work in track.

Although Bill played football in the fall of 1948, he got in enough running to be able to compete in several of our cross-country meets. This little bit of cross-country running served its purpose very well. In the first place it kept him in touch with running, and in the light of his previous experience in track, it gave him all the foundation work he needed for the spring track season. We took that as an opportunity to do further work on the alignment of his stride which was only possible up to a certain degree due to the natural shape of his legs. This work consisted mainly of keeping the knees pulled in, trying to develop an even and optimum stride and eliminate a tendency to bounce. We also instructed Bill to use his toes and ankles a little more than the average cross-country runner does. This, we hoped, would develop a little spring for his sprinting and hurdling.

By the time the cross-country season had closed, the weather had become too bad to work outside so we moved inside and worked on a 160-yard dirt track located in the basement of the college fieldhouse.

JOHN A. BAY began his "coaching" when only a freshman in high school because the physical education instructor left suddenly. He tutored his brother who three years later won the 100-yard dash, the 220-yard dash and the 200-yard low hurdles in the state meet and appeared on the National Honor Roll in two events. While studying at Oklahoma A & M, Mr. Bay volunteered his services as track coach at Stillwater.

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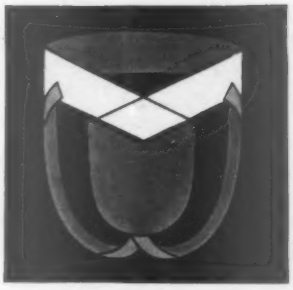

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Throughout December, January, and most of February we worked Bill only two or three times each week. No regular practice schedule was posted. These workouts were not an attempt to further conditioning but merely to maintain what condition he had gained from running cross-country. The work was done in a leisurely fashion and made as enjoyable as possible. A typical workout might have included any number of the following things.

1. Several laps of jogging in little half steps, emphasizing toe action and bounding. 2. Ten to fifteen minutes of hurdling and other stretching exercises. 3. A lap or so of sprinting the straightaways and jogging the curves. 4. About ten starts. 5. Work over one hurdle for form and running one to three hurdles with a start. 6. A couple of sixty-yard dashes. 7. Push-ups and a few setting up exercises.

It was during this winter period that we did our most concentrated work on the body mechanics involved in sprinting, starting and hurdling. We checked and rechecked every point. Nothing became too minor to overlook. Later on in the spring this paid off.

By the first of March we were back outside again and ready to settle down to some real training. As you will see from the following schedules, we divided our season into three periods. Each one ran for about three weeks. The early season period extended from the first of March to the first meet. The middle season period extended from the first meet of the season to the championship meets. The late season period included the championship meets—conference, regional and state.

The early season period was characterized by rapid conditioning. During this period we ran Bill overdistance on Mondays and Wednesdays. This consisted of striding from ½ to ⅞ effort over distances ranging from ¾ of a mile to 660 yards on Monday and alternate distances ranging from 440 yards to wind sprints (100-120 yards) four to ten times on Wednesdays.

On Tuesdays and Thursdays Bill worked on starts, hurdles, and the shorter dashes. Tuesday was the hardest working day of the two. On Tuesday more and longer starts were taken than on Thursday. Hurdling on Tuesday consisted of running over one to five hurdles and running a full flight of lows, while on Thursday hurdle work was for steps to the first hurdle only. Tuesday's workout contained work over the longer short-dash distances (150-330 yards at ¾ to full effort) in contrast to sprinting 50 to 100 yards two to four times on Thursday.

Another full flight of lows was run on Friday. This was a time trial.

Note that the work steadily progressed from the longer distances at under speed to the shorter distances at near top speed.

FIRST WEEK :

Monday: ¾ mile at ½ speed.

Tuesday: Six starts going out 35-40 yards—take one to three low-hurdles three times—run full flight of lows (full speed on first five barriers; bring it on in maintaining speed)—330 at ¾ effort.

Wednesday: Four alternate 440's as follows: 75-70-65-60.

Thursday: Four full speed starts going out 15-25 yards—two full speed starts going over first hurdle—two 100-yard dashes at 9/10 effort.

Friday: Race a full flight of lows.

SECOND WEEK:

Monday: 880 at ¾ speed.

Tuesday: Six starts going out 35-40 yards—one low-hurdle twice; two low-hurdles twice; three low-hurdles twice—full flight of lows at ⅞ effort—220 at ⅞ effort.

Wednesday: Six alternate 220's at 26 seconds each.

Thursday: Four full speed starts going out 15-25 yards—two full speed starts going over first hurdle—three 60-yard dashes at full speed.

Friday: Race a full flight of lows.

THIRD WEEK:

Monday: 660 as follows: 220-28; 440-59; 660-1:32.

Tuesday: Six starts going out 35-40 yards—take three to five low-hurdles twice—full flight of lows at 9/10 effort—150 yards at full speed.

Wednesday: Ten alternate wind sprints (100-120 yards) at full speed.

Thursday: Four full-speed starts going out 15-25 yards—two full-speed starts going over first low-hurdle—four 50-yard dashes at full speed.

Friday: Race a full flight of lows.

MID-SEASON:

This is characterized by a general slackening in conditioning. During this period over-distance striding work was cut to one day a week—Tuesday. It consisted of running 330-660 yards at better than 5/6 effort.

Monday became a day for shaking out the kinks obtained in the week-end meets. Work was started on intermediate and high hurdles. One to two of these were run on the grass as were four to six alternate wind sprints. Bill did some work on the pole valt on Monday also.

Polishing for the week-end meet started on Wednesday with two to six starts going out 35-40 yards and sprinting from 150-330 yards one or two times.

Thursday was strictly a polish day. It included two to six starts going out 15-25 yards, one short dash ranging from 50-75 yards, form work over one hurdle, and playing with the high jump.

I call the reader's attention to the fact that we ran Bill no further than five hurdles during the mid-season training period. We found out during early season that Bill had a good finish on the lows. Building up his speed was the big problem so it was unnecessary to run further than half a flight at any one time.

You will notice that the tempo of the workouts did not change but the amount of work was cut down. Only four to ten starts were taken each week. Hurdles were worked only twice a week and for no longer than ten minutes. Two other events, the pole vault and the high jump, were added, partly for diversion and partly because Bill competed in them during several dual meets.

FIRST WEEK:

Monday: Six alternate wind sprints the length of the football field—ten minutes work over an intermediate hurdle—work on pole vault.

Tuesday: 660 as follows: 220-28; 440-59; 660—1:31.

Wednesday: Six starts going out 35-40 yards—take five hurdles three to five times—two alternate 220's in 25—sprint 150 yards at 9/10 effort.

Thursday: Four starts going out 15-25 yards—one 75-yard dash—play with high jump—pass baton.

Friday: Rest.

Saturday: Competition.

SECOND WEEK:

Monday: Five alternate wind sprints the length of the football field—work for ten minutes over one high hurdle—work on pole vault.

Tuesday: Run 440 in 55.

Wednesday: Four starts going out 35-40 yards—take three hurdles three times—330 at ⅞—100-yard dash.

Thursday: Three starts going out 15-25 yards—one 6-yard dash—pass baton—play with high jump.

Friday: Rest.

Saturday: Competition.

THIRD WEEK:

Monday: Four alternate wind sprints length of football field—work for ten minutes on two high hurdles—work on pole vault.

Tuesday: Run 330 as follows: first

(Continued on page 52)

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A Graded Program for Beginning Tennis

By WILLIAM E. MURPHY
Tennis Coach, University of Michigan

INDIVIDUAL sports, such as tennis, golf, swimming, and badminton, have in recent years increased greatly in popularity. This increase is due in no small part to the emphasis on activities which have a definite carry-over value, activities that can be engaged in during adult life as well as during one's earlier, and more active years.

Tennis, with this increase in popularity, has grown to occupy an important place in the use of leisure time of youth and adults. With this growth has come a responsibility on the part of instructors, teachers, and coaches of the game to provide a systematized, and simplified, method of instruction — one that is easily adapted to classroom or individual instruction — with progression from easy to difficult, from simple to complex, and with clearly-defined levels of achievement well within the reach of the beginning player's abilities.

Interest and enthusiasm are easily maintained when definite steps are outlined through which the student's progress can be guided, and the confidence that comes to the player when he attains proficiency at each level will encourage him in working toward the attainment of the next more difficult level.

This article presents a simplified method of instruction, one that has been used successfully in working with both youngsters and adults. It includes step-by-step advancement, with progression from simple levels of play to the more complex levels. The mechanics of the basic strokes of the game are described for the player, and work toward the mastery of them is presented in a specific manner. Definite steps are outlined through which the player's progress can be guided and definite levels of play defined which are well within his abilities.

The methods and material are not intended to develop expert players, but aim merely at getting the beginner properly started and well along the road toward becoming a better-than-average player.

The matter of exactly what the first steps in learning the game of tennis should be has always been a subject of some discussion and often of argument. However, most experts, players as well as teachers, agree on two points: that correct form should be learned first, and that with this correct form one should be consistent in placing the ball within the boundaries of the court, and preferably to some particular spot within these boundaries.

The beginning player, then, should be concerned with the basic mechanics of good form: the manner and method of execution of the three primary strokes of tennis, the forehand ground stroke, the backhand ground stroke, and the serve. The player who learns well the mechanics of good form first, and then with it masters steadiness, quickly rises far above the average player. Accuracy and speed then come to him more easily, and he soon advances into the ranks of the advanced player and becomes increasingly concerned with tactics and strategy.

It has been found that the beginning tennis player makes fewer errors when hitting with a firm wrist and using a flat stroke than when hitting in any other fashion. For this reason, and because it has wide recognition among expert players and teachers, the flat stroking type of game is recommended. It is generally agreed that these strokes provide the best foundation for one's game, as they are more in keeping with correct bodily mechanics than others, and with these, power and control are transmitted into the shot smoothly and with little effort.

In this discussion, the mechanics of the flat stroke will be built around the following 7 points of form: 1. The Grip. 2. The Stance. 3. The Point of Contact. 4. The Backswing. 5. The Shift of Weight. 6. The Body Pivot. 7. The Forward Swing.

The mechanical parts of correct form will be described and explained, and practice routines through which this form may be acquired will be outlined through the following five progressive levels: 1. The Swing. 2. Hitting a Dropped Ball. 3. Hitting a Tossed Ball. 4. Run-and-hit a Tossed Ball. 5. Rallying.

The player should consider each level not an end in itself, but an important step in the total plan, and should strive to acquire proficiency at each level before moving on to the succeeding one.

WILLIAM E. MURPHY attended the University of Chicago where he was Big Ten doubles champion in 1938 and '39, Illinois state champ, Wisconsin state champ and runner-up for the National Collegiate doubles championship in 1939.

Mechanics of the Stroke: The Forehand

1. *The Grip.*

To get the proper grip, hold the racket at the throat with the left hand, and extend it straight away from the body at about waist height. Hold the racket face perpendicular to and the racket handle parallel to the ground. Place the right hand, fingers extended across the back of the handle, at an angle of 45 degrees to the handle, with the fingers parallel to the racket strings. The handle of the racket should pass diagonally across the palm of the hand from the base of the fore-finger to the opposite corner of the palm.

Wrap the fingers around the handle. The back of the palm should be directly behind the handle, not under it, nor on top of it. The fingers, when extended straight away from where the palm is resting on the handle, should, with the palm, form a flat surface which faces in the same direction as the hitting surface of the racket.

2. *The Stance.*

Place the feet comfortably apart in a position so that a line drawn through and across the shoulders is parallel to the right sideline and perpendicular to the net, or nearly so. Advance the left foot toward the right sideline approximately the length of one's foot. This is the ideal stance for hitting a forehand stroke, and should be used whenever possible. Variations in this stance will be necessary during actual play, but they can be learned quite easily after one has learned the original stance. Even while the ball is in play it is desirable that the stroke be made from a set stance, the running taking place between the shots and not while the stroke is being made.

3. *Point of Contact.*

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A518 (4FD)—Field Shoe. Sportan leather uppers, Goodyear stitched tap and heel, detachable steel spikes. Sizes: 7 to 12 inclusive, E width.

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Assume the stance just described and extend the racket arm directly outward from the body toward the sideline at an angle of 45 degrees to the ground. Now bring the racket head up until the handle is parallel to the ground. This will leave the racket and the arm in the same plane opposite the right side of the body at about waist level. Now advance the arm and racket forward toward the net and bend the wrist back slightly until the racket is parallel to the net and opposite the left side of the body. This is the *point of contact* for a waist-high ball, the height for which the stroke is first to be learned. At this point the wrist is bent back slightly. A ball hit at this *point-of-contact* will fly straight across the net, or straight to a wall from which it will bounce directly back to the hitter — unless some error in form has occurred.

4. *The Backswing.*

The clock-face theory, as suggested by Miss Mary K. Browne in *Design for Tennis* (A. S. Barnes & Company, New York) may be used effectively when making the backswing. Place the racket at the *point-of-contact* position, and imagine one's self to be standing on the face of a huge clock, with 12 o'clock to one's left, off the left shoulder, 3 o'clock directly ahead, and 6 o'clock to one's right, off the right shoulder. Now, keeping the wrist firm, swing the arm and racket-head straight back at waist level, keeping the racket handle parallel to the ground, and the racket face perpendicular to the ground, until the racket is directly over the 7 o'clock position on the imaginary clock, and at waist level. Hold the weight on the right foot. This is known as the *racket-back* position, the position from which the forward swing should always be made when hitting a ball at waist level.

5. *The Shift of Weight.*

The shift of weight is accomplished merely by stepping forward slightly with the left foot and transferring the weight of the body from the right foot to the left foot.

6. *The Body Pivot.*

The pivot is made by turning the body, at the hips, until the shoulders have passed through a quarter circle to face the net, whereas in the beginning of the movement they faced the side lines. The pivot should follow just after the shift of weight.

7. *The Forward Swing.*

The arm and racket have been brought halfway forward by the pivot, or through a quarter of a circle, although the arm has not yet moved in its shoulder joint. The arm should now be swung forward and upward until the racket is pointing directly at and reaching for the net, with the racket head at shoulder height. This position is called the *finish* position. The arm brings the racket up slightly as it goes forward because an easy stroke is to be learned first and the swing must be upward in order for the ball to clear the net and land deep in the opposite court. The wrist should be firm throughout the stroke and the arm should be extended outward from the body at an angle of about 45 degrees with the ground.

The Five Levels of Development of the Forehand

Level One — The Swing.

The movements described above should now be put together simultaneously in the following manner: Grip the racket as previously described. Assume the proper stance and place the racket at the point of contact opposite the left hip. Now take the racket back, keeping the wrist firm and in the same position as at the point of contact until the racket is directly over the 7 o'clock position on the imaginary clock. The arm should be away from the body at a 45-degree angle to the ground, and the weight should be on the right foot, with the shoulders approximately parallel to the right sideline. The full forward swing is now made by shifting the weight, pivoting, and swinging the arm, in a co-ordinated movement, to the finish position. During the swing, the knees are bent just enough to provide the knee action necessary to the pivot. The head is down and the body inclined forward far enough to throw the weight of the body on the toes.

The principle of the forward swing should now be understood. Its development must begin unburdened by any other activity. There should be no running into position nor any ball to worry about. With the forward swing perfected, the next logical step, hitting a dropped ball, will be learned more quickly.

One should spend considerable time practicing the swing, either alone or with a partner or instructor who can point out any deviations from the prescribed form that might occur. The two fixed points, the *racket-back* and the *finish* positions, should be called to mind frequently when practicing the stroke. If these two points are correct, that is, if the racket starts from the correct position and finishes in the correct position, the intermediate movements are much more likely to be correct also. These two positions represent the farthest back point of the swing and the farthest forward position of the swing.

While practicing the swing one should emphasize keeping the wrist firm, and swinging the racket at waist level. Most beginners have a tendency to "flip" the wrist forward when swinging, and many are inclined to dip the racket as it is swung forward.

Level Two — Hitting a Dropped Ball.

Any imperfections in the swing will show up the minute one starts to hit a dropped ball, as the ball will not go where one intended it to go. One must then go back over the swing until the faults have been ironed out.

Two new elements enter the picture at this point: First — *Eye Work.* The hitter must keep his eyes on the ball while swinging the racket, although the start and the finish of the swing should still be checked until they are perfect. Second — *Timing.* The ball has to be met at the top of its bounce, which should be at waist level and at the point of contact, just opposite the left hip.

Have a partner hold the ball about shoulder high so that when he drops it it will bounce up to and in front of the face of the racket, when the racket is held at the point of contact position. Have him try a few practice drops so that he can find the proper height and distance from the body at which to drop the ball. When this height of bounce and distance from the body have been perfected, take the racket back and practice a few swings, using the proper form. Then, while at racket-back position, let the ball be dropped. Swing "through" the ball and reach the finish position. Hold this position and check to see if everything is "O.K." If one swings "through" the ball and reaches the finish position correctly, the ball has probably gone where one intended it to go. Considerable time should be spent in hitting a dropped ball. Practice this level until one has become proficient at it, or until one can hit ten consecutive dropped balls into the hands of a waiting catcher 30 feet away. When one can hit ten balls directly back to the catcher he is ready to begin work on the next level — Hitting a Tossed Ball.

(The second half of this acticle will appear in the April issue and will include a discussion of the mechanics of the backhand stroke and the service.)

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Training for the High Jump

By JOHN W. WONSOWITZ
Track Coach, Hammond, Indiana, High School

James Harper racked up the nation's best mark in the high jump last year among high school competition with a jump of 6'5⅛". In this article his high school coach discusses the training and conditioning procedures he used with Harper.

JAMES HARPER used the belly roll—a modification of the Western roll. He approached the bar at approximately an angle of 60 degrees from dead ahead. The total distance of his run was 39 feet (this varied slightly depending on the slowness or fastness of the track). From the start to the take-off he took nine strides. Prior to the start of his jump he would stand with both feet on the start mark, then take off with his left foot. On his fourth stride he would hit his first and only check mark with his right foot. This check mark was some 28 feet and 3 or 4 inches from the point of take-off.

From the time of his start, the stride and speed increased, the speed of approach was neither fast nor slow. It was controlled to the height of the bar, a skill which comes only with experience. I have found that one check mark is plenty for a high school boy to worry about when jumping.

His maximum stride length was on the sixth, seventh and eighth strides, but his ninth stride was increased slightly to permit his body to lean back slightly and thus allow his outside leg to swing through a greater arc for the lift. On the last four strides he would gather for the jump —that is, he would maintain a slight knee bend for the powerful take-off. His check mark was so placed that when he was jumping it was unnecessary to stretch his stride or cut it. Such conditions destroy timing and timing is very important in this type of jump.

The Take-Off

After hitting his check mark properly, Harper watched the bar. Because of the extreme angle employed, his take-off foot, which was the inside foot, was about 1½ feet from the bar. Sometimes it was a little closer.

In the execution of the jump the right leg and both arms were swung up and forward simultaneously with a powerful extension of the take-off foot. This extension took place when the body had rolled forward until the center of gravity was directly above the take-off point.

After effecting the take-off, Harper rolled over the bar with his stomach

facing it and not with his side or hip, as is common in the Western roll. This belly roll, I am certain, gives a boy two or three inches extra height over the conventional Western roll. On heights of 6' and over, or even lower, a part of his body was always below the bar, but in making the jump he would roll over the bar. The illustration definitely shows this point. He had two faults which I think prevented him from jumping in the neighborhood of 6' 7": 1. He tucked his left arm along his chest instead of throwing it out and up. 2. The hitchkick or lift of his take-off leg was too slow and consequently knocked the bar off the standards.

***JOHN W. WONSOWITZ** was an outstanding vaulter in his competitive days, clearing 13' 4" as a senior in high school and 14' 1½" in college. He won the pole vault at the Penn Relays and the Big Ten meet in 1932, at the Big Ten meet in 1933 and at the Central Intercollegiate meet in 1935. He coached at Clyde, Ohio, High School and Hanover, Ohio, High School before going to Hammond. His teams have placed second five times in seven years in the state meet.*

Training Program

In order to get a boy to belly-roll it is necessary to start that type of form as early as possible — the sooner the better. Harper started in his freshman year and didn't get too far with it that year. Since there is so much timing and co-ordination involved, he practically overworked to master the form.

At the end of his sophomore year he began to show signs of good form. He cleared 5' 9" that year and his perfection came quicker than I expected — probably because of an exercise he did. This drill was executed by taking two strides in front of the bar and rolling over. Of course emphasis was placed on form, take off, and landing at this time. The height of the bar for this drill was about 4' 9". This type of exercise permits many jumps in a short time with very little energy expended. It certainly develops better form because the athlete learns more to control and balance himself.

During his junior year Harper cleared 6' 2" and tied for the state title at 6' 1½". In order to get most out of Harper during his senior year (please understand that at this time I considered him a fine jumper) I encouraged him to go out for cross-country. He did this and, to my surprise, won his letter. Pre-season running overdistance certainly develops co-ordination, spring, muscle tone, strength, and endurance. For the long, drawn-out meets a high jumper must have some endurance for those winning jumps. Many a high jumper has looked like a "million" qualifying in the morning and then sadly faded out of the competition in the afternoon session.

Besides running in the fall, Harper was also given the usual type of calisthenics, and plenty of them too. During the competitive season conditioning was brought about by light running and sprinting and working in front of the bar as I have stated. Practice jumping was only permitted on Tuesday if competition was scheduled for Friday or Saturday. The bar was

(Continued on page 55)

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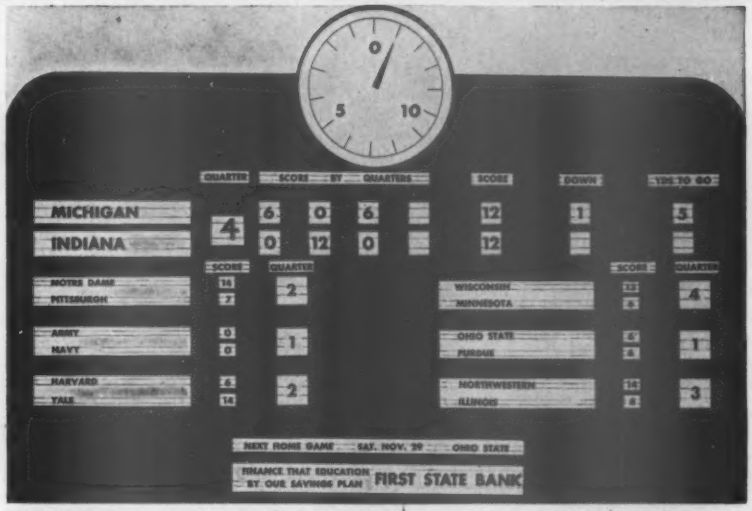

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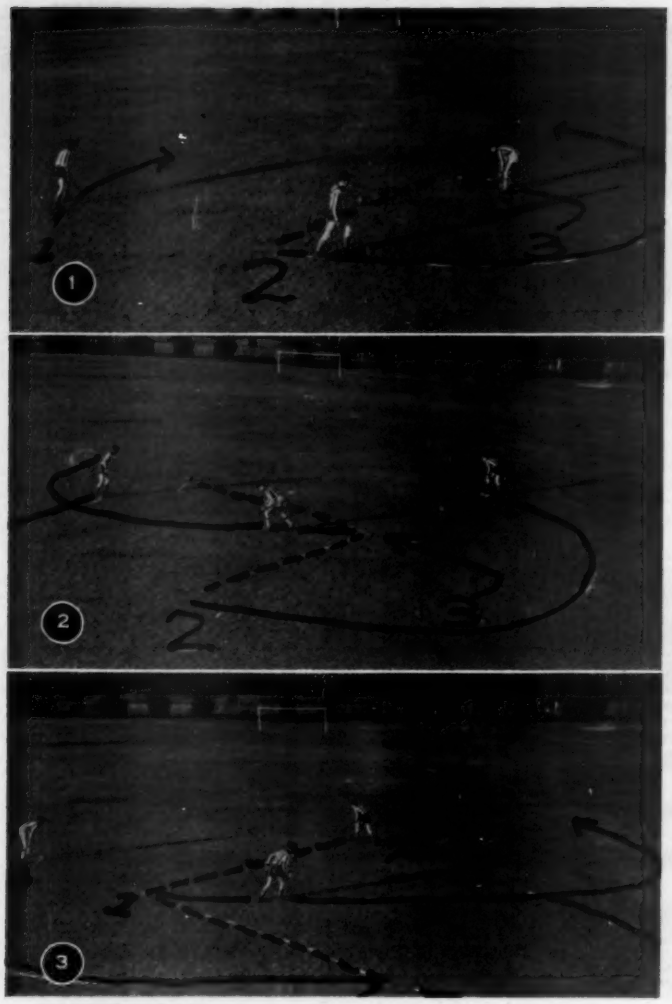


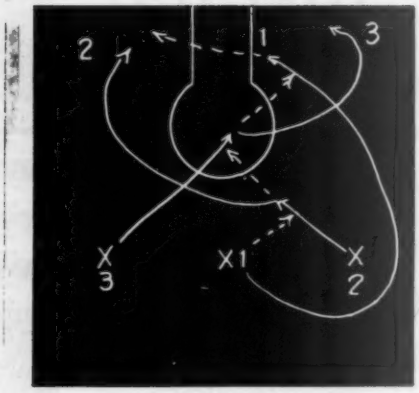
The Weave in Soccer

By FRANK WOLYNEC

Soccer Coach,

New Milford Junior High School,

New Milford, New Jersey



ADOPTING the weave from basketball and applying it to soccer holds intriguing possibilities. The weave in basketball has become a fundamental pattern of play. It is sometimes called the grapevine and is used frequently as a warm-up maneuver before a game. Some teams use it as a basic style of play. By passing the ball between three players the weave enables efficient movement down court. It is conducive to good passing and is generally confusing to the defense.

The diagram illustrates the weave as used in basketball.

The play begins with the center man, 1, passing the ball to 2 or to 3. In the diagram 1 passes to 2 and then cuts behind him. One swings wide and around to the outside. Two now passes to 3 and cuts behind him. Two circles around wide and to the outside. The combination of three is again in position to start the play all over again. The players have interchanged positions with 3 having the ball in the center and ready to pass to 1. One passes to 2 who, receiving the pass, will pass to 3 starting the weave all over again.

Traditionally soccer coaches have been reluctant to experiment with new offensive alignments. Soccer players are taught early that position play as played by teams throughout Europe is standard and must be adhered to. Players sometimes interchange but only as a dire emergency arises wherein the vacated position has to be covered. Standard soccer practice frowns at such a move. Unlike basketball and other sports, versatility and exploitation of position play has been discouraged in soccer.

At New Milford we felt that any game should be tapped to its utmost possibilities. Players enjoy new patterns of play because new interest is developed. This in turn places a premium on the individual initiative of the players and uncovers unsuspected talents and skills.

In soccer we discovered that position play used with the weave and worked by a combination of any three men does not weaken in any way the full coverage of the soccer field. Players move into correct positions when they interchange—thus the wing may find himself in the center's position and the center in the wing's position. This maneuver usually confuses the defense, particularly if defensive as-

(Continued on page 54)

FRANK WOLYNEC graduated from Springfield College in 1929 and received a Masters degree from Columbia in 1933. He has coached soccer at New Milford for 20 years. His teams went undefeated from 1940-46. In 1947 and '48 they were league champions. Mr. Wolynec is a member of the National Ratings Committee of the U.S. Soccer Association.

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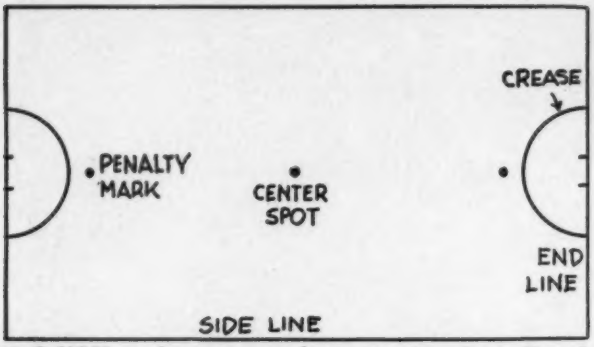

Borden Ball

By ERIC HUGHES

Supervising Instructor in Physical Education
Bemidji State Teachers College

DO YOU need a new sport for your physical education classes, intramural or recreational programs? Borden Ball may be the game you are looking for.

Borden Ball, in its present form came into existence in 1940 at Camp Borden, Ontario, Canada, when Andy Ley, who was serving as Y.M.C.A. War Service Secretary at the Camp, modified the game of Olympic Handball, to include many of the basketball and football skills common to Canadian youth.

The sport became very popular during the war years in Army and air force camps throughout Canada. Due to the amount of running involved, it was used as a conditioning game in physical training periods. It also was very popular as a recreational sport. In off-duty hours, men formed pick-up teams and played indoors and out, depending on the weather. Leagues were formed in many camps and competition became very keen.

The game is played with a football or rugby ball which is thrown from player to player until it can be brought close enough to the opponent's goal to be thrown through it.

A team consists of six players: a goal keeper, two defense men and three forwards. Because the game is very fast and tiring, like hockey and lacrosse, unlimited substitution is allowed.

When Borden Ball is played outdoors, the field or court should be about the size of a hockey rink, that is, 65 by 165 feet or larger. Indoors, it may be played on a basketball court or on a larger area if available.

The only markings that are necessary on the playing surface, other than the side and end lines, are the center spot, the penalty spots, which are located seven yards in front of each goal, and the two crease lines. The crease is a semi-circular area with a radius of five yards in front of each goal.

The goals are similar to hockey goals. They should be approximately four feet tall and six feet wide. Goals built of two-by-fours or pipes about two inches in diameter prove very satisfactory. They should be constructed so as to be movable for indoor or outdoor use. It helps considerably in determining whether a goal has been scored to have goal nets.

The game consists of two fifteen-minute periods with five minutes rest between. If overtime is necessary, a five-minute rest is given and then two five-minute overtime periods are played with no rest between the periods.

Play is started by the referee throwing the ball to the center forward at the midpoint of the court. A coin toss is used to determine the team that gets the ball at the start of the game. At the start of the second half the other team gets the ball. After a goal has been scored the game is recommenced at the midpoint of the court by the referee throwing the ball to the center forward of the team scored upon. Each goal, whether scored from the field or from a penalty shot counts as one point.

A player may only take three steps with the ball, or may remain at a standstill for only three seconds when in possession of the ball. The penalty for either of these violations is loss of the ball to the opposing team at the point of the violation. All defensive players must keep at least three yards from the player with the ball. The penalty for a violation of this rule is a penalty shot. (It is the writer's personal opinion that it makes a better game if this rule is modified to read three feet instead of three yards). Should a pass be incomplete, allowing the ball to come in contact with the ground, the ball goes to the opposing team at the point where the ball touched the ground. The play is not stopped when this happens. The players on the side missing the ball go on defense immediately and the nearest player on the other team scoops up the ball and play continues. If a pass is intercepted by an opposing player the play also continues. If the ball is caught approximately at the same time by a player on both teams it is up to the referee to determine which side gets possession. If it is caught at exactly the same time by both players he should award it to the team that last had sole possession of the ball.

Only the defensive goal keeper is allowed in the crease. Should any offensive player step into the crease his team loses possession of the ball to the defensive goalie. An offensive player when shooting must stay out of the crease or semi-circular area even afther the goal has been scored. That is, he can't follow-through into the crease after he has shot. A violation of this rule nullifies the goal if it is scored. In all cases the goal keeper puts the ball back in play by passing it to a teammate. Should a defensive player step into the crease the offensive team gets a penalty shot.

A penalty shot consists of a free shot from a point seven yards in front of the goal. Both feet of the person taking the penalty shot must remain firmly on the ground until the goal is scored or missed.

A player stepping out of bounds with the ball loses the ball to the opposing team at the point he stepped out of bounds. If a pass goes out of bounds the ball is awarded to the other team at the point where the ball crossed the boundary line. The

(Continued on page 56)

ERIC HUGHES graduated from the University of Illinois and received a Masters degree in physical education there. He lettered in cross-country and track and taught physical education while an undergraduate at Illinois. At Bemidji Mr. Hughes teaches physical education, directs the intramural program and coaches.

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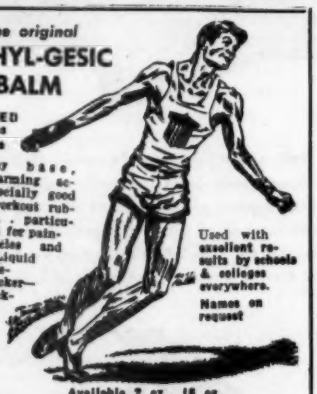

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Developing A Winning Miler

(Continued from page 13)

2. 880 at 2:20 pace; 880 easy; 880 at 2:20 pace.
3. Three laps; sprinting the first half of each lap.
4. Two miles; first one and one-half miles easy, gradually pick up pace on last 880.

WEDNESDAY
1. Warm-up and calisthenics.
2. Get timed for one and one-half miles.
3. Three miles easy; running the sixth, twelfth, and eighteenth laps at mile pace.

THURSDAY
1.Warm-up and calisthenics.
2. 880 at 2:20 pace; 880 easy; 880 at 2:20 pace.

***CARL M. BONGE** began his coaching career at Frankton, Indiana. He went to Anderson in 1925 as assistant basketball and track coach. In 1936 he became head track coach. His record since 1936 is as follows: ten North Central Conference track and field championships; three North Central Conference cross country championships; eleven track and field sectional titles; four Indiana state track and field championships; and four Indiana state cross-country championships.*

3. Six laps; sprinting the last half of the second, fourth, and sixth laps.

FRIDAY
Bloomington Indoor Meet.

The work schedules listed below are for the last week in April and are for a quarter-mile track. We move out to the football stadium the first week of April.

MONDAY
1. Warm-up and calisthenics.
2. Get timed for one and one-half miles.
3. Two miles easy, striding out on east straight-a-way on each lap.

TUSEDAY
1. Warm-up and calisthenics .
2. 440 in best mile pace; walk 220; repeat.
3. Baton work. Six to eight passes on field. Three to four passes running 110 yards each at 440 pace.
4. One and one-half miles easy, with a short sprint on second, fourth, and sixth laps.

WEDNESDAY
Dual Meet.

THURSDAY
1. Warm-up and calisthenics.
2. 330 for time.
3. Three-quarters mile in best mile pace. Set up time for each quarter.
4. One and one-half miles easy, sprinting west straight-a-way of each lap.

FRIDAY
1. Warm-up and calisthenics.
2. Stride field four times.
3. Start with sprinters.
4. Baton work.
5. 62-second quarter-mile.
6. Four easy laps on grass.

SATURDAY
Kokomo Relays.

The First Week In May

MONDAY
1. Warm-up and calisthenics.
2. One and one-quarter miles. First mile in 5:10; last quarter for time.
3. Two miles easy, sprinting east straight-a-way on odd-numbered laps.

TUESDAY
1. Warm-up and calisthenics.
2. 660 for time.
3. 63-second quarter; rest one minute; 65-second quarter; jog 110 yards; sprint 220.
4. Baton work and starts.
5. One-mile; running both curves of each lap at good mile pace; straight-a-ways easy.

WEDNEDAY
Dual Meet.

THURSDAY
1. Warm-up and calisthenics.
2. 330 for time.
3. Three-quarters mile at mile pace. Set up time for each quarter.
4. One and one-half miles easy; running west straight-a-way of each lap in best mile pace.

FRIDAY
1. Warm-up and calisthenics.
2. Stride football field four to six times.
3. Baton work and starts with sprinters.
4. Run 330 in 48 seconds; 110 easy. Repeat three times.
5. Run four laps easy on the grass.

SATURDAY
North Central Conference Meet at Richmond.

What's the Pitch?

(Continued from page 18)

the pitcher) the batter should expect the curve ball to have a bigger break on it than when hitting against the wind. When the wind is with the pitcher the batter should expect the fast ball to be a bit faster than usual, and expect the curve ball to break less than usual. This is based on scientific principles of wind currents and their relationship to a propelled spinning object.

When a batter begins to assimilate all of this information, and when he begins to use it as a basis to form a thinking pattern in the batting process, then, and only then is he first beginning to learn how to hit.

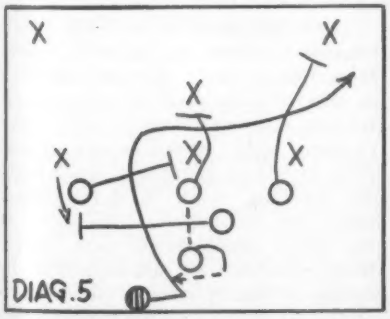
Six-Man Real Football

(Continued from page 30)

ball on a clear pass to the tailback and then goes after the weak-side halfback who is coming across.

We shift both right and left and also hit back to the weak side with a play in which our end and center cross-block on the defensive weak-side end and center.

Passing has often been thought to be the outstanding feature of six-man football but actually defenses are catching up with the preponderantly passing teams and it is now no more of a passing game than eleven-man. One of our best passing plays is shown in Diagram 4. The ball goes to the center back who gives to the short man who fakes to the left halfback and drops back. We have had a great deal of success with this pass and it affords good opportunity to be covered in case of interception.



In Diagram 5 is our weak-side play. This keeps the defensive center honest. The ball goes to the center man who spins forward to the right. The tailback feints to the right and comes back into the hole between left end and center. The short man, or quar-

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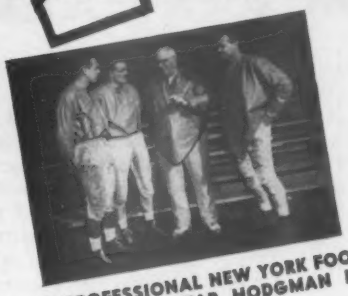

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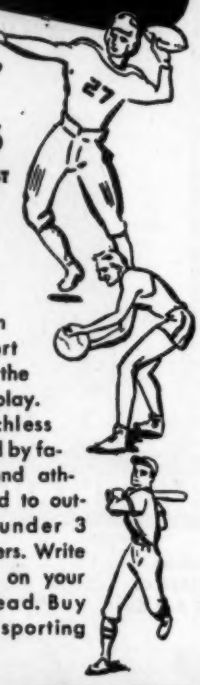

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terback, gets a good shot at the defensive end and our left end uses a reverse body block on the center. If the defensive center is in the strong-side hole, our center gets him and the end goes after the line-backer.

Speed in Track and Field Events

(Continued from page 22)

in "meet" style, jumping up toward "meet" heights.

Speed in the high jump. Another aspect of this "practicing with speed" in the high jump lies in the objection, "but the high jump simply will not permit speed. Run with speed and a broad jump results". This is true unless an athlete can learn to handle speed. Les Steers was the greatest exception to the rule that high jumpers do not need much practice. He *jumped* and *jumped* and *jumped,* perfecting all the aspects of form — the run, the take-off, and the clearance, and holds the world's record at 6′ 11″. As has happened in the other field events, high jumpers will learn to build themselves up to take more strenuous practice. With more numerous jumps they will learn to handle speed, they will discover that horizontal speed can be converted upward and they'll set the world's record well over 7 feet.

Speed in the discus. A third example is to be found in the discus throw, one of the most difficult events to coach and perfect. Good balance and co-ordination are essential if an athlete is to perform respectably. Because balance is so difficult in this event, there is a tendendency for coaches and athletes to minimize speed whenever it appears to interfere with balance. From the standpoint of immediate results, this practice does seem to be effective. However, as soon as maximum performance at this slow speed is secured, a new level of performance is attempted by increasing the speed of the turn. Unfortunately, it is now discovered that the increased speed almost makes a new event and that the former good balance and co-ordination have been lost. Each time a new level of performance is sought, each time that a faster turn is attempted, the same difficulty is encountered.

Rapid Rhythm Learned Quickly

It has been the writer's practice for many years to establish a fairly rapid rhythm of the turn during the very first week of a beginner's career. A long "one-e-e-e-e-" on the hop is followed by a much faster "and two". This rather rapid rhythm is always learned very quickly. "That feels so much easier, coach" is the almost immediate response. Unfortunately, something soon goes wrong with balance and position. Years ago when this happened, we used to cut down on the speed immediately, go back to fundamentals, and move through the entire process over again. Now we keep our speed (tempering it with good judgment, of course), and concentrate our work on position and balance *with speed.* In any one session, or even series of sessions, this may be discouraging; but in the long run, it has paid off.

The real contribution of Fitch of Minnesota to discus throwing lay in perfecting a form with great momentum throughout the turn. His position at the front of the circle was actually less powerful than that of, for example, Anderson of Cornell, the 1932 Olympic champion. But the speed with which he *fell with balance* around the circle was unprecedented.

The present crop of fine discus throwers is assiduously copying the unimportant details of the style of the world's record holder, Gordien, (186′ 10 7/8″). The real reason for their success, however, beyond that of earlier performers, is that they are all using Fitch's momentum in the turn.

Summary

In summary, this article emphasizes five points related to the significance of the element of momentum in championship performances and coaching in track and field athletics:

(1) Good form in the field events consists of right action *with speed.* It is not a series of positions such as one sees in pictures of form. It is not moving slowly with good balance and co-ordination. Good form means performing at one's highest possible level, a level which demands momentum as well as the other essentials of form. Good form cannot be demonstrated by doing all the phases of form "perfectly" although at slow speeds. "Perfectly" implies *form with speed* as a single concept which connot be divided.

(2) Progress in record performances during the last twenty years has occurred primarily because of an increased emphasis upon momentum

throughout the entire action of an event. Development of this idea has not been uniform in the various field events. It has always been obvious in the broad jump. It came early in the javelin through use of the Finnish style and also in the hammer with the increased momentum of two and then three turns. Fonville in the shot, and Fitch in the discus re-emphasized a trend in these events. No one has yet suggested a single improvement in the "form" with which Warmerdam cleared 15' 8½" in the pole vault. But a different emphasis in all phases of form would quickly occur if a Jesse Owens were to take up the event. Only the high jump remains; only in the high jump do we question that high speed is possible. But someday soon, a great athlete will "sprint" to his take-off, thrust his left leg ahead of him so his body is at an angle of about 35 degrees with the ground, and thereby be forced to jump vertically. He will climax his leap with Steers' perfection of clearance and end by making 6' 11" as passe' as the Norwegian, Hoff's 14' in the pole vault.

(3) Acquiring momentum can and should come much earlier in the learning process than is traditionally the custom. This statement is less true if the coach and athlete must concentrate on performance this season, and have only a few weeks for work. But in terms of ultimate performances and world's records, no other point of view will suffice.

(4) Best field event practice procedures consist of "meet" conditions and "meet" methods in which attention is concentrated upon the "how" of performance rather than upon its extent. When in the meet, the athlete should forget "how" and concentrate on speed with relaxation.

(5) Perfection comes only through right practice, if practice is often enough and long enough. If the body can't "take it", the athlete should rest for a while and try again. Perhaps all the body needs is conditioning. American coaches used to think that a single time trial at a single track event was all the body could "take" in a single day. But now track men double back and even triple back, running faster each time, and still finish up ready for more. Are high jumpers and javelin throwers something special? Frankly, the experience of this writer says, "Yes, they are", but the future may hold a different answer.

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The Talent and Skill of the 1948 U.S. Olympic Team

By JOHN T. CORE

THE purpose of this detail study of the Olympic Squad is to show the five basic natural talents of each member listed. Then by special formulas, based on these five events alone, to show the potential skill of each for eight other events.

Facts uncovered are sufficient for the writer to go way out on that proverbial limb, just as he did in publicly predicting that Harrison Dillard would win the 100 meters.

The two tables should be studied along with the information that follows. Permit the writer to offer several definitions used in preparing his published "Five Star Track Event" which has a bearing on this study.

Talent—a special natural ability or aptitude.

Latent—is applied to what lies concealed.

Potential—exists in an undeveloped state.

Skill—the ability that comes from practice.

This method is a screen test of the five natural talents of track with a score based on equality of performance between each event—the better the performance the higher the point score.

The writer was able to obtain performances from twenty-nine of some forty odd members having a bearing on this study. Their actual and where necessary, estimated performances are listed in Table 1. The point score just to right of each is their score. The point average, at the bottom, is significant in that it gives a fairly smooth average across the board for this exceptional list of competitors. The performance average is listed as it may be of interest to some readers. Underscored points indicate that individual's actual competition. The record of all these men is well known, but for a practical use of this chart one should read opposite each name to

JOHN CORE is a former track star and an official of the Virginia AAU as well as a track official in many local and national track meets. A few years ago he evolved a system of grading track performances. From the grading scale for his five basic events he evolved formulas to predict performances in the other track events. Ever since he publicly predicted Dillard's victory in the Olympic 100-meters there have been many questions regarding Core's system. In response to our request he explains this rating system.

Table 1

PLACE	NAME	TOTAL POINTS	HIGH JUMP		BROAD JUMP		SHOT PUT 12 lb.		100 YARDS		880 YARDS	
1	MONDSCHEIN, Irvin	515	6'7¾"	124	24' 0"	103	55' 0"	115	10.3	86	2:06.0	87
2	FUCHS, James	504	5'11"	89	22' 8"	95	63' 6"	**137**	9.7	103	2:12.0	80
3	MORCOM, Richmond	504	6'7¼"	120	23'10"	102	46' 0"	95	9.9	97	2:04.0	90
4	BOLEN, Dave	503	6' 1"	96	22' 6"	94	42' 0"	85	9.7	103	1:51.0	125
5	SMITH, Guinn	493	6' 5"	112	23' 9"	101	48' 6"	101	10.1	91	2:05.0	88
6	DOUGLAS, Herbert	493	6' 3"	104	25' 0"	**109**	40' 0"	81	9.6	106	2:01.0	93
7	BOURLAND, Clifford	491	5' 10"	86	22'11"	96	49' 0"	102	9.6	106	1:55.7	101
8	WHITFIELD, Mal	489	5' 8"	80	21' 7"	88	44' 1"	90	9.8	100	1:49.8	**131**
9	WRIGHT, Lorenzo	485	6' 0"	92	25'11"	**114**	42' 0"	86	9.7	103	2:04.0	90
10	DILLARD, Harrison	480	6' 0"	92	24' 0"	103	40' 0"	80	9.5	**109**	1:59.5	96
11	EDDLEMAN, Dwight	478	6'7¼"	**120**	23' 0"	97	44' 0"	90	10.4	84	2:06.0	87
12	GUIDA, George	476	5' 9"	83	21' 6"	88	44' 2"	90	9.8	100	1:53.0	115
13	MATHIAS, Robert	475	6' 2"	100	21' 6"	88	54'4½"	115	10.1	91	2:10.0	81
14	SIMMONS, Floyd	469	6' 4"	108	22' 0"	91	50' 6"	106	10.4	84	2:12.0	80
15	RICHARDS, Robert	468	6' 3"	104	23' 1"	97	44' 0"	90	10.1	91	2:07.0	86
16	McGREW, Verne	467	6'8¼"	**124**	22' 8"	95	35' 0"	69	10.1	91	2:05.0	**88**
17	EISCHEN, Clem	466	5' 10"	86	21' 8"	89	42' 0"	85	10.2	88	1:52.4	118
18	EWELL, Barney	464	5' 11"	89	25' 2"	110	35' 0"	69	9.6	**106**	2:04.0	90
19	HOUDEN, Richard	460	5' 5"	72	22' 0"	91	45' 0"	93	9.5	109	2:00.0	95
20	GORDIEN, Fortune	459	6' 0"	92	22' 0"	91	58' 0"	124	10.0	94	2:30.0	58
21	STANICH, George	455	6'8¼"	**124**	21' 6"	88	42' 2"	86	11.0	72	2:08.0	85
22	BARTEN, Herbert	453	5' 5"	72	22' 5"	93	33' 5"	65	9.9	97	1:50.7	**126**
23	DIXON, Craig	447	6' 2"	100	22'10"	96	35' 0"	69	9.8	100	2:10.0	82
24	THOMPSON, Wilbur	443	5' 10"	86	20' 0"	79	62' 0"	**134**	10.3	86	2:29.6	58
25	LIKINS, Robert	443	6' ½"	92	22' 1"	91	52' 0"	107	11.0	72	2:11.0	81
26	GEHRMANN, Donald	437	5' 5"	72	21' 0"	85	35' 0"	69	10.1	91	1:52.0	120
27	SEYMOUR, Steve	431	5' 5"	72	20' 0"	79	55' 0"	117	10.7	78	2:08.0	85
28	BILES, Martin	411	5' 6"	74	20' 0"	79	45' 0"	93	10.6	80	2:08.0	85
29	FRANK, Vic	402	5' 0"	62	19' 6"	76	58' 6"	125	10.8	76	2:25.0	63
	Point Average (93.52)	467.62		94.03		93.38		95.45		92.91		91.86
	Performance Average		6' ½"		22'4¾"		46' 1"		10.1		2:02.5	

Table 2

TALENT — Enter points from Summary Sheet

SKILL — * By formula below based on Talent Events

Events		Total	H. J.	B. J.	Shot	100	880	220	440	Mile	H.H.	L.H.	Discus	Pole Vault	Javelin
Code & Formulae . . .			A	B	C	D	E	2D+E / 3	D+E / 2	D+2E / 3	2B+D / 3	3B+2D+E / 6	2C+D / 3	3A+2D+C / 6	3D+2B+C / 6
Mondschein	*	515	124	103	115	**86**	87	86	86	86	97	94	105	109	96
Fuchs		504	89	95	**137**	103	80	95	91	88	98	92	125	101	106
Morcom		504	120	102	95	97	90	94	93	92	100	98	95	**108**	98
Bolen		503	96	94	85	**103**	125	110	**114**	117	97	102	91	96	97
Smith		493	112	101	101	**91**	88	90	89	89	97	95	97	**103**	96
Douglas		493	104	**109**	81	106	93	102	99	97	111	107	89	100	102
Bourland	**	491	86	96	102	106	101	**104**	103	103	99	100	103	95	102
Whitfield	**	489	80	88	90	100	**131**	110	**115**	120	92	99	93	88	94
Wright	***	485	92	**114**	86	103	90	98	96	94	110	106	91	94	103
Dillard	***	480	92	103	80	**109**	96	104	102	100	105	103	89	96	102
Eddleman		478	**120**	97	90	84	87	85	85	86	92	91	89	103	89
Guida		476	83	88	90	100	115	105	**107**	110	92	96	93	89	94
Mathias	*	475	100	88	115	91	81	87	86*	84	89	87	107	99	94
Simmons	*	469	108	91	**106**	**84**	80	81	82	81	88	87	98	99	90
Richards		468	104	97	90	91	86	89	87	87	95	93	90	**97**	92
McGrew		467	**124**	95	69	91	88	90	89	89	93	92	76	104	88
Eischen		466	86	89	85	**88**	118	98	103	**108**	88	93	86	87	88
Ewell	***	464	89	110	69	**106**	90	**101**	98	95	108	105	81	91	101
Houden	(sub)***	460	72	91	93	109	95	104	102	99	97	97	98	87	100
Gordien		459	92	91	124	94	58	82	76	70	92	86	**114**	98	98
Stanich		455	**124**	88	86	72	85	76	78	80	82	82	81	100	79
Barten		453	72	93	65	**97**	**126**	107	111	116	94	99	78	79	90
Dixon		447	100	96	69	**100**	82	94	91	92	**97**	95	79	**94**	93
Thompson		443	86	79	**134**	86	58	76	72	67	81	78	118	94	91
Likins		443	92	91	107	72	81	75	76	78	85	83	95	88	**84**
Gehrmann		437	72	85	69	**91**	120	100	105	**110**	87	92	76	77	85
Seymour		431	72	79	117	78	85	80	81	82	78	79	104	81	**85**
Biles		411	74	79	93	**80**	85	81	82	83	79	80	88	79	**81**
Frank		402	62	76	125	76	63	72	69	67	76	74	**109**	77	84

* Decathlon ** 1600 m. Relay *** 400 m. Relay Olympic Entry in bold face

see in percentage figures the best natural talents. By reading up and down each column, and with obvious exceptions, the Oylmpic entry should show the higher score.

Deduct some 25 to 35 points across the board and one would have a very well-balanced high school squad. Many coaches would settle for less.

Assuming, then, that the performances are true and accurate, that the point score is equal, we have in Table 1 a true picture of Oylmpic talent. The study is then complete from the actual participation of the individual. Table 2 deals only with the point score of Table 1 plus additional point scores from the formulas. Only the names and point scores have been copied on the Talent and Skill Sheet and appear under sub title "Talent".

How Table 2 Is Derived

Under sub title "skill" are eight events and a formula for each. The potential skill point score of each individual, for each separate event, is arrived at by formulas based on two or more talent scores in combination. For example: opposite Fuchs you will see 95 points for 220 Yards. Two times D (100 Yards) plus E (880 Yards) divided by three equals 95.

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The formulas do a pretty good job of selecting the better events for the individuals in line with past performances. The acid test is how they stand up in reading vertically in each event. Modesty in estimating some talent performances and obvious exceptions as listed below will account for some probable errors.

220 *Yards*—Records show that Ewell and Bourland make the best of their potential skill. Bolen, Douglas, Whitfield, Dillard, Houden, Guida, and Barten did not enter this event and may be classed as exceptions, though well qualified.

440 *Yards*—Eliminate Barton who was busy in the 880 and Five Star selects the three actual Olympic entries.

Mile Run—Whitfield, Bolen and Barten all show greater potential skill than the two 1500-meter entrants. Note Whitfield has 120 points against 110 for Gehrmann. I predict that Whitfield is the best qualified present-day competitor to break existing records in the mile run. I wonder, have our best qualified competitors given serious consideration to the mile run?

Hurdles—The 97 for Dixon shows hurdles to be his better event as does the 105 for Dillard. The low hurdles follow about the same trend. Jesse Owens showed us that a good broad jumper and a good sprinter is hard to beat in the hurdles. Did the other high scores here ever try the hurdles?

Discus Throw—The World's record holder in the shot put, James Fuchs with 125 and World's record holder in discus, Fortune Gordien with his 114, just does not seem to make sense. Nevertheless I predict that Fuchs is the best-qualified competitor to break existing records in the discus. The 107 points for Bob Mathias indicates that the discus may be one of his better college events.

Pole Vault—The three top scores are the three Oylmpic entrants in their best potential skill event. It is interesting to note that the three high jump specialists and Mathias show well in this event.

Javelin—Here is the bombshell—the three Olympic entrants are at the bottom of the total talent score, and at, or near the bottom of the skill score. The only trend is in the shot put and that is not big enough to hide behind. It is obvious that further study must be made on this formula. The writer wonders if these three outstanding competitors could have been good in high school and carried through in this event alone at college. If so, then their talent performances could also date back.

In conclusion it is hoped that this study has been of interest and that Five Star will channel men into correct events early in their career. It is further hoped that the Talent and Skill Sheet will eliminate much trial and error for the coach and that Five Star will be a constructive contribution to a grand sport.

"Latent Talent is Potential until practice makes for Skill".

Championship Hurdles

(Continued from page 34)

300 yards at 9/10 effort; last 30 yards at full effort.

Wednesday: Two starts going out 35-40 yards—take one hurdle several times—run two 150-yard dashes.

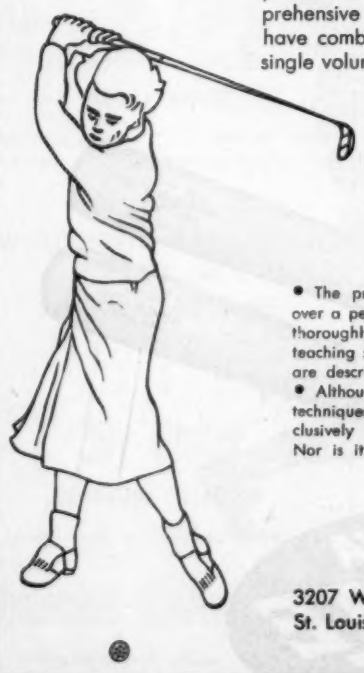
Thursday: Two starts going out 15-25 yards—one 50-yard dash—pass baton play with high jump.

Friday: Rest.

Saturday: Competition.

LATE SEASON:

During this period the work was cut to a minimum but tuning up was very much in evidence. Since Bill ran the high hurdles in the conference and regional meets, we ran him a full flight the Mondays pre-



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ceding these meets. Only enough work was done to maintain condition and keep a fine competitive edge.

During the week of the state meet he did very little except jog, take a few starts, work over three hurdles easy, and stride a 220 around 30 seconds.

FIRST AND SECOND WEEKS—conference and regional meets.

Monday: A few starts—work over one to three high hurdles five minutes—run a full flight of highs.

Tuesday: Two laps of sprinting the straightaways and walking the curves.

Wednesday: A few starts—run over one high hurdle a couple of times—run three highs a couple of times—run 150 yards at 7/8 effort.

Thursday: General shaking and loosening up.

Friday: Rest

Saturday: Competition.

THIRD WEEK:

Monday: A few starts on the grass—stride the football field a few times.

Tuesday: A few starts—go over three lows a few times—stride a 220 in 30 seconds.

Wednesday: General stretching and loosening up—a fair amount of easy running on the grass (jog two or three laps).

Thursday: Suit up—jog and stretch a little.

Friday: Rest

Saturday: Competition.

Summary

We like to give our boys a foundation for running with cross-country in the fall. It is a great help if in the winter the skills and technical details can be worked out. Early in the spring we try to get our boys in good condition. This gives us insurance against early season injuries which might result from running in bad weather. This also gives us time to work on the problems in form and technique which will crop up after the first few meets. Since we want to be in top form for our championship meets we start easing off on the hard work during mid-season in order to build up reserve energy. This would not be possible if we did not condition early in the season.

One final word must be added. Although we feel that we used the proper procedures in training and conditioning Bill Williams, no amount of effort on our part could have produced a champion without having a boy who wants to run. It is wonderful to work with that type of boy. Bill was a great competitor and had a fine competitive spirit—a characteristic without which few boys can hope to reach the championship class. Bill was consistent in that he presented himself ready to run in each meet without any fuss or bother. I am sure that other coaches can appreciate what I mean by that.

Considering the fact that Bill did generate his speed slowly, and that in moving from the half mile to the low hurdles, he was actually moving from one extreme of sprints to the other, the 22.7 he ran in the finals of the state meet was indeed an accomplishment.

The Weave in Soccer

(Continued from page 42)

signments are traditionally carried out, such as the defensive center-halfback covering the offensive center and the defensive halfbacks covering the outside wings.

The use of the weave in soccer, as played by our team, originated with the desire to find a kick-off play. The center and the two insides worked the play in practice. When it was first tried, the players were surprised to find that by interchanging positions and with good control of the ball, they were able to move with ease through the defensive team. At first the element of surprise was a help in making it work but we found out later that it still worked when the defense knew it was being tried. It was not unusual to find the weave bringing the ball down in front of the opponents' goal with the goalie the only real threat to stop a possible score.

Variations are possible. It is not necessary to always move in the sequence order of the weave. After the first two or three moves in the weave, the ball may be kicked across the field to the opposite side. The players then remain in their relative positions which they held at the time of the cross-field kick. It can be seen that at such a time the original lineup which started the game may have an entirely new look. The eleven players are still in good soccer position even though they are not in their original positions.

The use of the weave by any combination of three soccer players made it possible to open the game to new

patterns of play. The players found more excitement and interest in the game because it offered more variety and placed a premium on individual initiative. Abandoning the traditional set position play opened the game to new possibilities for offensive maneuvers.

Combinations of the Weave

There are various combinations of three players who can work the weave. In one, the three players are the two insides and the center. Here the center starts the play. Starting close together this offers a good kick-off play. If the weave fails to function, the ball may be kicked to the opposite side of the field where a wing may be in a good position to get the ball.

In another combination the left inside, the left wing and right inside are involved. The right inside would begin the weave.

In a third combination the left inside, the left wing and the center are involved. The left inside starts the play.

Another would have the three halfbacks as a combination with the center halfback starting the play.

Illustration 1 shows the movement of any combination of three. Player 2 has passed the ball to 3 and is moving to the rear of 3 in a half-circle sweep to the right. Three is moving across to receive the pass from 2. In the meantime 1 is swinging around to be in position to receive a pass from 3.

Illustration 2 is a continuation of the play. Three has received the ball from 2 and has kicked it towards 1 who is coming in to receive the pass from 2. Three is moving in a half-circle sweep behind 1. Two is moving into position to receive a pass from 1.

Illustration 3 brings the play back to its original start with 2 receiving the pass. One and 3 have interchanged positions and the play begins to the left with 2 passing to 3 and 1 moving into position to receive a pass from 3.

Training for High Jump

(Continued from page 40)

placed at 5' 6" for his practices—never higher. There was no overdistance running at this time.

Harper delighted in working on low and high hurdles merely as a physical activity and to develop more relaxation. He had the ability to remain relaxed in competition, which

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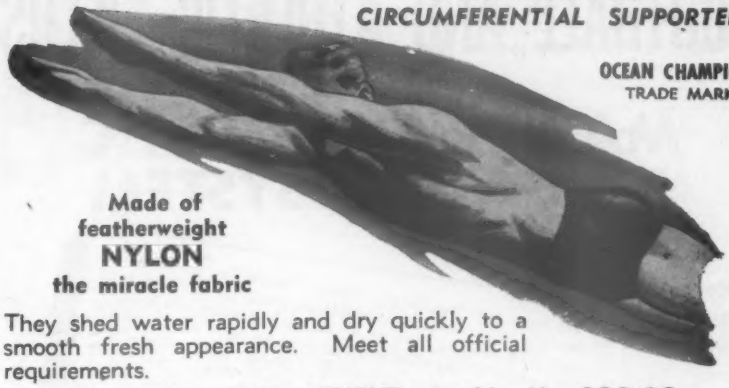

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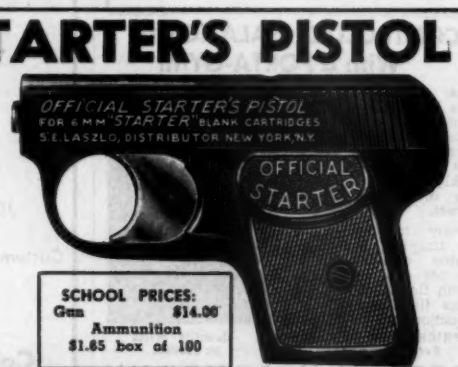

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made him a better jumper. In the conditioning period calisthenics were also given, as well as rope work. Harper was taught to complete a set of stretching exercises prior to workouts as well as competition. These consisted of back bends, body twisting and performing the hurdle exercise sitting on the ground. He was told that he must be thoroughly loose to effect the best jumping and at the same time prevent any possible strain or pull on a muscle.

By the time Harper became a senior his form was pretty good and the emphasis in training was placed on form and the prevention of overwork. Toward the end of the season less calisthenics and workouts were planned. I have seen too many high school boys make their best jumps the very first meet and thereafter fall down with each successive meet because of overwork or because of excess running in track meets which takes the spring out of the leg. I believe a good high jumper has no business in runs exceeding 100 yards. The less running the better. Harper did only high jumping.

Individual Styles Baseball

(Continued from page 24)

up, late in the game, should a fast player be substituted for the man on second? In such a situation the coach would use a substitute, utilizing the individual differences of one player over those of another. If the squeeze play is on, one must use players who can perform such a play.

I am speaking of high school coaching in discussing the adapting of individual differences to get peak performances. Since many an awkward freshman may make a star senior if certain adaptations are made, it behooves all coaches to make such adaptations.

The coach may save himself a great deal of mental anguish and failure if he would vary his coaching techniques by making players adapt individual styles due to individual differences.

Borden Ball

(Continued from page 44)

ball is thrown in from behind the boundary lines in the same way as in basketball, except a bounce pass is illegal.

Personal fouls are called for holding, personal contact, or otherwise

restricting the movement of a player with or without the ball. Four personal fouls disqualify a player from the game.

In order to make Borden Ball a quick success, the following teaching hints should be observed.

Teaching Points

1. Start beginners with nothing more than the three 3's: a. Only three steps may be taken while in possession of the ball. b. While in possession of the ball, a player may stand still for not more than three seconds. c. All opposing players must stay at least three yards from the ball-carrier. (It was suggested earlier by the writer, that this rule be modified to three feet.)

2. At first there will be many incomplete passes. Point out that these are occasions for a change of possession of the ball resulting in a rapid shift from offense to defense on the part of the fumbling team. The team that fumbled should not attempt to recover, but should leave the ball to be picked up by a member of the other team.

3. Bunching of players, as in most sports, slows the game.

4. Beginners will find that the game is much more enjoyable when short easy passes are used.

Modifications

1. Instead of guarding the man with the ball from a distance of three yards, this distance may be reduced to three feet. This rule could be modified still further by allowing defensive players to guard as in basketball.

2. Borden Ball may be played with a basketball or any other ball of suitable size. Round balls, however, lack the zip of the football for passing.

3. If pads are not available for the goal keeper it might be wise to increase the radius of the crease to seven yards and to place the penalty shot mark ten yards from the goal. The goal keeper may even be eliminated. An auto tire, through which the ball has to be thrown, may be substituted for the goal, making a goal keeper unnecessary. A box that has to be hit by the ball might also be substituted for the goal.

4. To speed up the game, the ball may be put into play by the goalie after a goal has been scored. This would be the equivalent of the rule that eliminated the center jump after a basket in basketball.

Veterans now attending Canadian Universities have kept the game of Borden Ball alive. It is very popular

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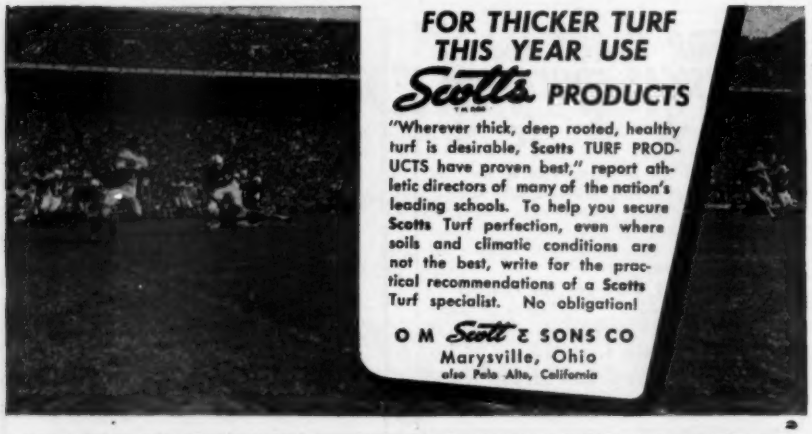

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in college physical education classes and in intramural programs. The game has appeal to junior and senior high school students as well as college men. Because of the football and basketball skills involved, which are familiar to most American and Canadian boys, the game is not difficult to learn. The simplicity of the rules, the wide open nature of the play and the lack of necessity for expensive uniforms or equipment all have a great deal to do with making the game attractive.

The only written rules on Borden Ball are contained in the "Athletic Handbook with Rules" published by the National Council of Young Men's Christian Associations of Canada. The term "Borden Ball" was first used and the rules first published in the "War Service Manual" of the National War Services Committee of the Y.M.C.A.'s of Canada in 1944.

A Forward Step In Catching

(Continued from page 10)

right-handed batter, the same rule would apply, and the footwork would consist of moving the right foot forward and to the side at about a 45-degree angle, with the catch being made as the foot hits the ground. The return throw is of course made immediately.

However, with a pitch that is inside to a right-handed batter, the footwork is practically the same as catching a ball directly over home plate. This is an exception to part of the rule where we step with the right foot into the path of the oncoming ball. Despite this exception, the ball can be caught with ease and returned to the pitcher or thrown to a base.

With a left-handed batter and a pitch to the outside, the step again is forward with the right foot and diagonal to the direction of the oncoming ball.

The only other possibility that might arise would be when the pitch is beyond the range of one stride. In that situation the slide step is employed for the purpose of getting in front of the ball. The footwork plan followed for this is the same as that followed for an outside pitch to a left-handed batter.

To get these thoughts across to a candidate, I take a position about 12 to 15 feet in front of him and make a practice of tossing a ball directly

at him. I do this until the movement is learned. After that the same plan is repeated, first tossing to the catcher's right and then to his left. When I am sure that he understands what we are attempting to accomplish, I suggest to him that he practice the footwork movements until they become almost automatic.

One query that has been raised more than any other, is the point of whether or not this idea of stepping forward doesn't interfere with the batter. In answer I point out that if the batter swings at the ball, the bat is well ahead of the plate before the ball is ever caught. If no move is made to swing at the ball there naturally can be no interference.

JOSEPH E. TRUSKOWSKI won eight varsity letters at the University of Michigan in football, basketball and baseball and was captain of the 1929 Wolverine eleven. Following graduation he coached at Olivet College and Iowa State College before going to Wayne. In addition to his duties as baseball coach he assists Lou Zarza with football.

The High Hurdles

(Continued from page 15)

over the hurdle, landing, between hurdles, and the finish. Each part will be discussed separately.

The Start

All sprinter type or shorter-legged boys should take eight strides to the first hurdle, whereas the longer-legged boys or striders may be able to handle seven strides. I prefer to have hurdlers use eight strides to the first hurdle. As a rule, the hurdler can develop his speed and have control and balance by the time he reaches the first hurdle. It is my opinion that the start is very important in high hurdling, for hurdling requires rhythm, running and jumping worked off of speed, skill, co-ordination, and timing.

Sometimes it is necessary to change a hurdler's feet in starting. When this must be done it becomes necessary to do a lot of starting work on the flat and with a gun. The hurdler has to change arm and leg co-ordination work especially for the first three

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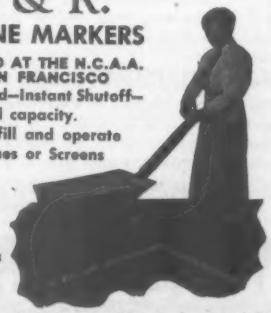

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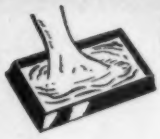

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steps. This requires a lot of effort and thought to change a left-footed starter to a right-footed one or vice versa.

A quick cue to remember in strides to the first hurdle is — if a hurdler takes eight strides to the first hurdle, his lead leg will be his back leg in starting — if he takes seven strides, his take-off leg will be his back leg.

Oftentimes in early season, a hurdler is stretching for the first hurdle or for his take-off area. In this case the hurdle should be placed 14½ yards from the start instead of the regulation 15 yards. This will enable him to take the first hurdle without stretching or straining. This should be continued in practice until he is able to stretch out naturally without straining to make the first hurdle at the required distance.

Approaching the Hurdle

It is extremely important in high hurdling that the hurdler be running at about 7/8 speed at his take-off going into the hurdle. He should definitely have control of his body at the take-off and should be relaxed and concentrate on the on-coming hurdle. His body should be slightly forward with his eyes focused on the top of the on-coming hurdle until the take-off; then he should pick up the top of the next hurdle or the finish line, whichever is next.

As soon as the hurdler hits his take-off foot, it should be pointed straight down the track, perpendicular to the hurdle. This must be watched closely for a push-off sideways wastes 20 to 30 per cent of the hurdler's driving power, thereby decreasing his speed and sending him into the hurdle slightly off-balance or sideways. Ordinarily the take-off will vary slightly, depending on the height of the hurdler. In the high hurdles it will vary from about 6'10" to 7'6".

The lead leg comes out of a natural stride to lift toward the top of the hurdle. It is lifted with a vigorous motion from the hip. The lead leg should be slightly flexed at the knee. A short-legged hurdler will probably use a straight lead-leg lay-out.

The arm and body drive should start forward as soon as the lead leg starts up. This should be done in a vigorous manner to get the maximum drive or impetus going into the hurdle. Some coaches refer to this as bucking the hurdle.

As to arm action, there are two distinct types: single and double. There are many abbreviated forms of

these two. Personally, I prefer the double-arm action. In my mind it is much easier to teach beginners and a hurdler does not have to have as much co-ordination using the double-arm action.

The Carriage Over the Hurdle

The arm action, front-leg lead, and back-leg drag play a very important role here.

In the front-leg lead, the toe should be turned down, the heel held up towards the achilles tendon, the knee flexed. The lead foot should be whipped toward the top of the hurdle but slightly off center. The hips and trunk of the body should go over the center of the hurdle.

The arms should be thrust in a vigorous manner toward the lead leg. Assuming that the left leg is the lead leg, the right arm or the balance

This illustration shows the side-stride exercise. It is mainly for developing timing and co-ordination between the balance-arm and back-leg drag.

arm should be fully extended with the palm of the right hand parallel to the track. The right hand should be about twelve inches away from the foot and extended slightly beyond the left toe. The left arm or off arm should be slightly flexed, the hand not fully extended, but held at about 7/8 length, the palm down in a relaxed manner. The left hand should be not more than six inches away from the left ankle.

The drag leg comes out of its natural stride, the foot should push straight off the track and be fully extended to get maximum drive. The lift starts slowly, with the knee above the foot and a gradual pull from the hip. When the drag-leg knee gets about eighteen inches from the top of the hurdle the pull becomes vigorous to help accelerate the body over the hurdle.

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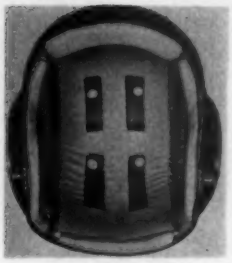
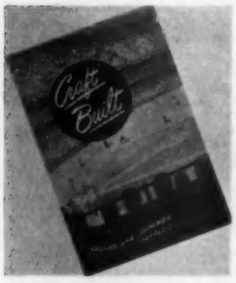
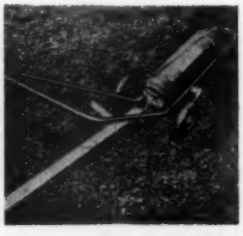


A NEW safety helmet that combines maximum protection of all the vital head areas with a surprising minimum of weight is now being manufactured by A. G. Spalding & Bros. Made of Plyolite, the No. 100 helmet is claimed to be more durable and form-fitting than the old plastic model. The one-piece shell is of a resin and rubber composition so tough that it won't crack and so resilient it distributes shock evenly. Padded with scientifically-shaped foam and cellular rubber padding and lined with sheepskin, the helmet eliminates the tape suspension.

THIS low-priced all-electric portable popcorn machine has an 8-quart kettle popper that produces ten boxes of popcorn every three minutes. It has a heated storage cabinet that holds enough popped corn for 100 boxes and storage compartments for boxes, raw corn and seasonings. A meshed screen separates the unpopped corn and a 150-watt infra-red bulb keeps corn at eating temperature. A similar machine is available that is gasoline-fired. For further information write: Don B. Oliver, 1432 Farwell Ave., Chicago 26, Illinois.



THIS is the new spring and summer catalog of the Ohio-Kentucky Manufacturing Company, Ada, Ohio, which features the 1950 Craft Built line of baseball gloves. There is a wide selection of all types of gloves—fielders, basemans, and catchers—for both hardball and softball. There are gloves in a wide range of prices from professional baseball grade to sandlot mitts. Over fifty gloves are listed in the catalog complete with illustrations of each and full information. Catalogs are available upon request to the above address.



SHOWN at the right is the new wet marker for marking athletic fields of all types manufactured by Supreme Markers, Hackettstown, New Jersey. This marker will operate on any surface and is especially effective for marking on grass and cinder tracks. It sprays a line of uniform density and width without fuzzy or ragged edges. It is the only pressure marker of its kind, the manufacturer claims. For further information write to: Supreme Markers, Hackettstown, New Jersey.

THIS is a new, improved version of the Official Starter's Pistol. The gun has a clip holding eight blanks which are the imported Starter brand, .22 caliber extra-loud type. The pistol shoots on top and is non-convertible to a firearm. Because of this, it is sold without restrictions and may be carried around without a permit. It is safe and foolproof. Available through S. E. Laszlo, 25 Lafayette Street, Brooklyn, New York. School price is $14.00. Ammunition is $1.65 per box of 100 blanks.

At one time over the hurdle there is a slightly "dead" pause when the lead leg is almost at full length, arm and body drive in its lay-out, and when the drag-leg knee and foot, all are almost at right angles. There are three things that can carry a hurdler through this pause and help him over the hurdle: One is his momentum into the hurdle, another a fast back-leg action, perfectly timed, and finally the lead-leg snap-down accompanied by body dip.

The Landing

The front-leg snap-down plays an important part in coming off the hurdle. A beginner has to be careful using this, however, for it will whip him off his feet, throw him off balance, make him raise his body too fast or land on his heel if it is not timed properly. A good hurdler should ride his body drive and his momentum out until he feels that his buttock is right over the top of the hurdle. Then he should whip his front leg down, retain his body lean, start his balance-arm cut and complete his back-leg pull-through. This should all be timed so well that when his lead foot lands, his body lean is still forward, his balance arm is about half way through its cut in a down and out position, his drag leg is pulled through vigorously from his hip, his knee is higher than his foot in an outstretched manner. When the front foot lands, the balance arm and drag leg should be at least half way through their respective cuts.

Between the Hurdles

When the hurdler lands on his lead leg, his balance arm, body lean, and drag leg should be timed perfectly so he is in running position. His arms should be pumped like a sprinter, he should retain his body lean between the hurdles and his eyes should be focused on the top of the on-coming hurdle. A hurdler should concentrate on hurdling and never let his mind wander or his eyes drift out of his running or hurdling line.

The Finish

When the hurdler comes off the last hurdle he should immediately focus his eyes on the finish line. As soon as he can attain his balance and body lean, he should shorten his stride and run like a sprinter through the finish.

Coaches Are Not Different

(Continued from page 20)

Prior to the war, a study of some two hundred successful business and professional executives in Chicago revealed that with few exceptions they had all tried several different occupations before finally taking up the work in which they were then engaged. One man had held down sixty-five different jobs before he engaged in his present vocation. The rate at which coaches leave the coaching field would not be too much above that in other fields with the possible exception of doctors and dentists.

Pegler makes the point that within the short space of a few years, coaches find themselves outmoded. The chemist, the physicist, the engineer, the doctor, the dentist, the lawyer and the business man of a few years back would be a total loss in today's business society if he didn't keep pace with recent developments. The saying, "You can't win today's game on yesterday's hits" is just as true in any of the above fields as it is in the coaching field.

Pegler then proceeds with a denunciation of the two-platoon system and he is not alone in this regard. He does, however, miss the boat by predicting that the new rule will limit substitutions again in the interests of the majority. Lou Little, hard-working member of the football rules committee, sent questionnaires to all the members of the Football Coaches Association. Replies were received from 585. The coaches themselves indicated not only a preference for retaining the present so-called two-platoon system, but even went further by advocating a change to permit one incoming substitute on fourth down.

Making predictions is always risky business and we will not boil Pegler in oil for this oversight, but we did want to correct the impression that coaches are different from those employed in other fields of endeavor. We don't think coaches change their vocation any more than do those in other fields. A coach that doesn't keep up with present trends and techniques is just as outmoded as the doctor who doesn't make use of the miracle drugs.

Attendance Taxes Must Go

IN the past we have repeatedly pointed out the injustice of the federal admission taxes on school activities. From the beginning we contended that any tax on youth is wrong, particularly the one that requires a boy or girl be taxed for attending a function at their own school.

There is a move under way to revise the excise tax laws during the present session of Congress. Every school administrator and coach should immediately write his congressman and senator, pointing out the unfairness of such a tax.

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